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BLUE JAY

March 1990

The Blue Jay, founded in 1942 by Isabel M. Priestly, is a journal of natural history nd conservation for Saskatchewan and adjacent regions. It is published quarterly b ne Saskatchewan Natural History Society, Box 4348, Regina, Saskatchewan. S4P 6. CN ISSN 0006-5099.

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Cover: *Adult female Great Horned Owl, 34 Avenue nest, Edmonton. W.H. Hoffma*

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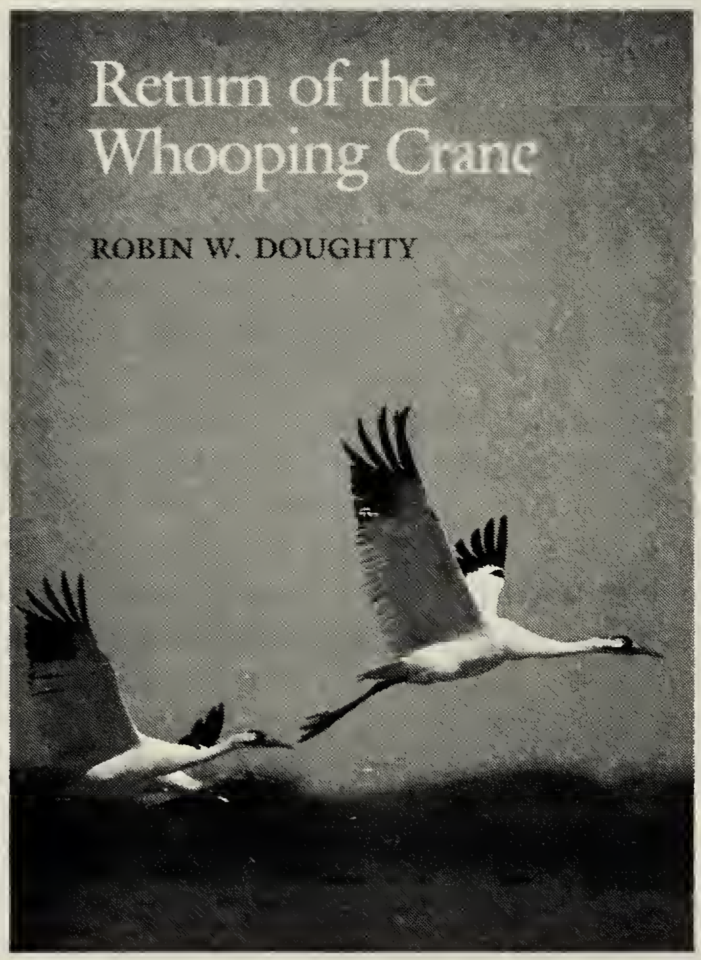

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Bohemian Waxwing *Wayne*

ORRECTIONS AND ADDITIONS TO IPPERS AND BUTTERFLIES OF THE NAWA—LAC DU BONNET REGION, UTHEASTERN MANITOBA*

ER TAYLOR, Box 597, Pinawa, Manitoba. R0E 1L0

he addition of materials herein up- the article from 1988 to spring 1989.

e sequence and nomenclature fol- the recently published *The butterflies anitoba*, which is based on Klassen's klist, but includes a number of recent ges in nomenclature.[5 4]

PERIIDAE -- Skippers

venal's Dusky Wing (*Erynnis nalis*) -- Uncommon; three scattered ings in spring 1989. 22 May - 3 June.

lian Skipper (*Hesperia sassacus*) -- ve from the list.

pper and Salt Skipper (*Amblyscirtes n*) -- Uncommon; observed in wood- adjoining gardens in Pinawa. 31 - 23 June.

IDAE -- Whites, Marbles and hurs

ckered White (*Pontia protodice*) -- mmon. This species is difficult to ate from the Western Checkered White (*P. occidentalis*), but is usually more lightly marked. Thirteen sightings from 6 years at eight scattered locations appear to be referable to *protodice*. This was confirmed for a road-killed specimen found in Pinawa, 2 September 1978, identified by Paul Klassen. 25 July; 25 August - 15 September.

Alfalfa Sulphur (*Colias eurytheme*) -- Should be Alfalfa Butterfly.

LYCAENIDAE -- Gossamer Wings

Brown Elfin (*Callophrys augustus*) -- Uncommon.

Hoary Elfin (*C. polios*) -- 13 May - 3 June.

Pine Elfin (*C. niphon*) -- Sometimes locally common near Seddon's Corner, Milner Ridge and Old Pinawa, usually found in association with other elfins. 13 May - 3 June.

Greenish Blue (*Plebejus saepiolus*) -- 13 May - 4 July.

---

uring the shuffle of material between editors in our attempts to get the *Blue ay* back on schedule in 1989, the final request for modifications to Peter's rticle did not end up with the remainder of his material [*Blue Jay* 47(2):89-100.]. Our sincerest apologies are extended and our hope that not oo many will miss the final corrections and additions.

NYMPHALIDAE -- Brush-footed Butterflies

Satyr Anglewing (*Polygonia satyrus*) -- This species is difficult to separate in the field from the Comma (*P. comma*). Both are expected here, based on the distribution maps given by Klassen et al.[5] Individuals of one or the other species have been observed on dates from 28 April to 23 August, but mainly in July and August, no more than four per day.

Green Comma (*P. faunus*) -- Uncommon, the only definite records being in late May.

Distribution maps published by Klassen et al. indicate that about a dozen more species may yet be found in this ly area.[5] Most of the candidate specie re prairie butterflies at the eastern frin of their range, localized forest specie or stray migrants. None is expected t be either common or widespread.

---

[4] KLASSEN, P. 1984. Checkli of Manitoba butterflies (Rhopalocer J. *Lepidopt. Soc.* 38:32-39.

[5] KLASSEN, P., A.R. WESTWOOD, .B. PRESTON and W.B. McKILLOP. 39. The butterflies of Manitoba. Mar ba Museum of Man and Nature, Win eg. 290 pp.

Y.E.S.

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OTES ON THE GREEN FROG AND
HE MINK FROG IN MANITOBA

ER TAYLOR, P.O. Box 59, Pinawa, Manitoba. R0E 1L0

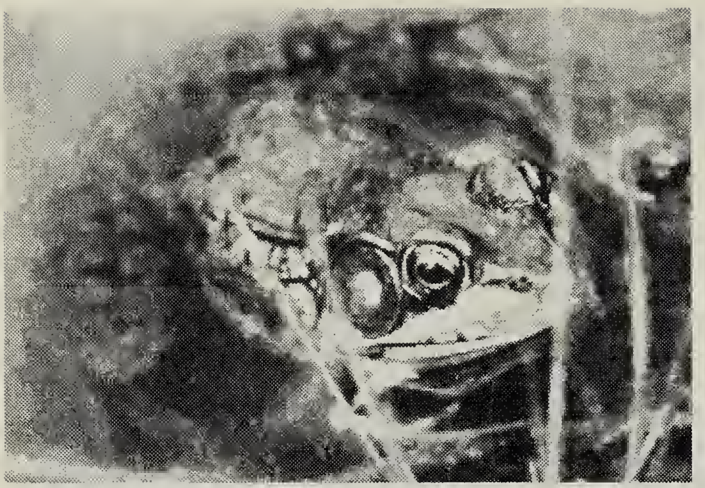
n Frog habitat at Springer Lake, Manitoba *P. Taylor*

e Green Frog [*Rana clamitans*
nota (Rafinesque)] and the Mink
[*R. septentrionalis* Baird] are both
y aquatic species that reach the
tern limits of their ranges in
eastern Manitoba.[1 2 3 5 6] Both are
mmon in the province. This paper
ts a sound record of the Green Frog
of its previously recorded Manitoba
e and additional sight and sound
ds of the Mink Frog.

ere are only three Manitoba
mens of the Green Frog, all from
eshell Provincial Park (P.P.): two
at George Lake by S. Criddle, 7
ber 1936, and one east of Pointe du
by R.K. Stewart-Hay, 20 August
.[6] Logier and Toner cite an additional
ty, Caddy Lake (also in Whiteshell
based on correspondence with R.W.
n, and this is included on Preston's
ution map.[5 6]

re are many more records of the
Frog than the Green Frog in Manitoba, all in or near Whiteshell P.P.[6] Early confusion as to the status of this species in the province was clarified by Cook, who collected 12 specimens and examined others, and Preston has mapped seven known localities.[1 6]

While conducting a Breeding Bird Survey at Springer Lake, Nopiming P.P. (50°32′ N, 95°28′ W), at 0500 h on 23 June 1989, I heard a familiar and unmistakable "clung," the territorial call of a male Green Frog. It was no longer calling at 0930, after the bird survey was complete, but calls were heard again on three subsequent visits that summer: 0600 to 0700 h 25 June; 1915 to 2000 h 29 June; 2130 to 2200 h 31 July. It is likely that the same individual was heard on each occasion, because the calls issued from the same point in the lake, close to the eastern shore of a bay near Provincial Road (P.R.) 314. The calls were clearly audible from 300 to 500 m across the bay.



Green Frog in New Brunswick P. Taylor

These observations confirm the continued, albeit perhaps tenuous existence of the Green Frog in Manitoba, and May indicate its territorial behaviour in the province (for an account of the territorial nature of this frog, see Jenssen and Preston, and references therein[4]). The calling dates fall within the expected breeding season. The locality is about 30 km north of the previous specimen localities, George Lake and Pointe du Bois. Springer Lake lies in a rocky, forested area at the edge of the Maskwa burn, site of a major forest fire in September 1983. The bay where the frog was heard is bordered with emergent vegetation (mainly sedges and cattails), and Yellow Pond-lilies (*Nuphar variegatum*) are numerous in the open water.

Small numbers of Mink Frogs were also heard in the same bay on each visit. On 25 June, they were heard at five additional locations southwest of Springer Lake. Three of these locations were along Peterson Creek, which drains Springer Lake into the Oiseau (Bird) River. The Oiseau River flows in turn into Lac du Bonnet on the Winnipeg River. From the junction of P.R. 314 and 315, the three locations were 4.9 km northeast, 2.5 km northeast, and 4.2 km southwest. The fourth was a beaver pond east of P.R. 315, 3.0 km northeast of Poplar Bay campground. The fifth was the eastern extremity of Pinawa Lake, just northwest of the junction of P.R. 313 and 315 (50°20′ N, 95°47′ W). Poplar Bay and Pinawa Lake are both arms of Lac du Bonnet. All these localities lie st within the northwestern range limit c ne Mink Frog as estimated by Preston.[6]

The Mink Frog's call is less distin ve than that of the Green Frog, usua a triple cluck that suggests the phrase ' o-ber duck." This resembles the call c ne Wood Frog [*R. sylvatica* LeConte], w ch is abundant in much of Manitoba, in ding the Whiteshell - Nopiming re n. Although the Wood Frog chorus i an early spring phenomenon, some n-dividuals call sporadically in mid- n-mer. At the first of the Peterson C ek localities listed above, identificati of calling Mink Frogs was confirmed b x-cellent views of four individuals s n-ming and floating in the slow, dark w ers of the creek. They were readily iden ed by their size (comparable to a Lec rd Frog, *R. pipiens* Schreber) and g en colour with irregular dark mottling.

I thank W. B. Preston for encou e-ment and helpful comments.

[1] COOK, F.R. 1963. The rediscov of the Mink Frog in Manitoba. *Can. Fiel at* 77:129-130.

[2] COOK, F.R. 1984. Introducti to Canadian reptiles and amphibians. atl. Mus. Nat. Sci., Ottawa. 200 pp.

[3] HEDEEN, S.E. 1986. The sou geographic limit of the Mink Frog, *septentrionalis. Copeia* (No. 1) 239-2

[4] JENSSEN, T.A. and W.B. PRES N 1968. Behavioral responses of the ale Green Frog, *Rana clamitans*, t its recorded call. *Herpetologica* 24:181- 2.

[5] LOGIER, E.B.S. and G.C. TO R 1961. Check list of the amphibian nd reptiles of Canada and Alaska. Contr 53; Life Sci. Div., Roy. Ont. Mus., Toron 92 pp.

[6] PRESTON, W.B. 1982. The m phibians and reptiles of Manitoba. an Mus of Man and Nature, Winnipeg. 1 op

URVIVORS OF THE PAST: WILL THEY AVE A FUTURE?

RARE NATIVE PLANT SPECIES OF THE COMMERCIAL FOREST

NALD F. HOOPER, Box 40, Somme, Saskatchewan. S0E 1NO

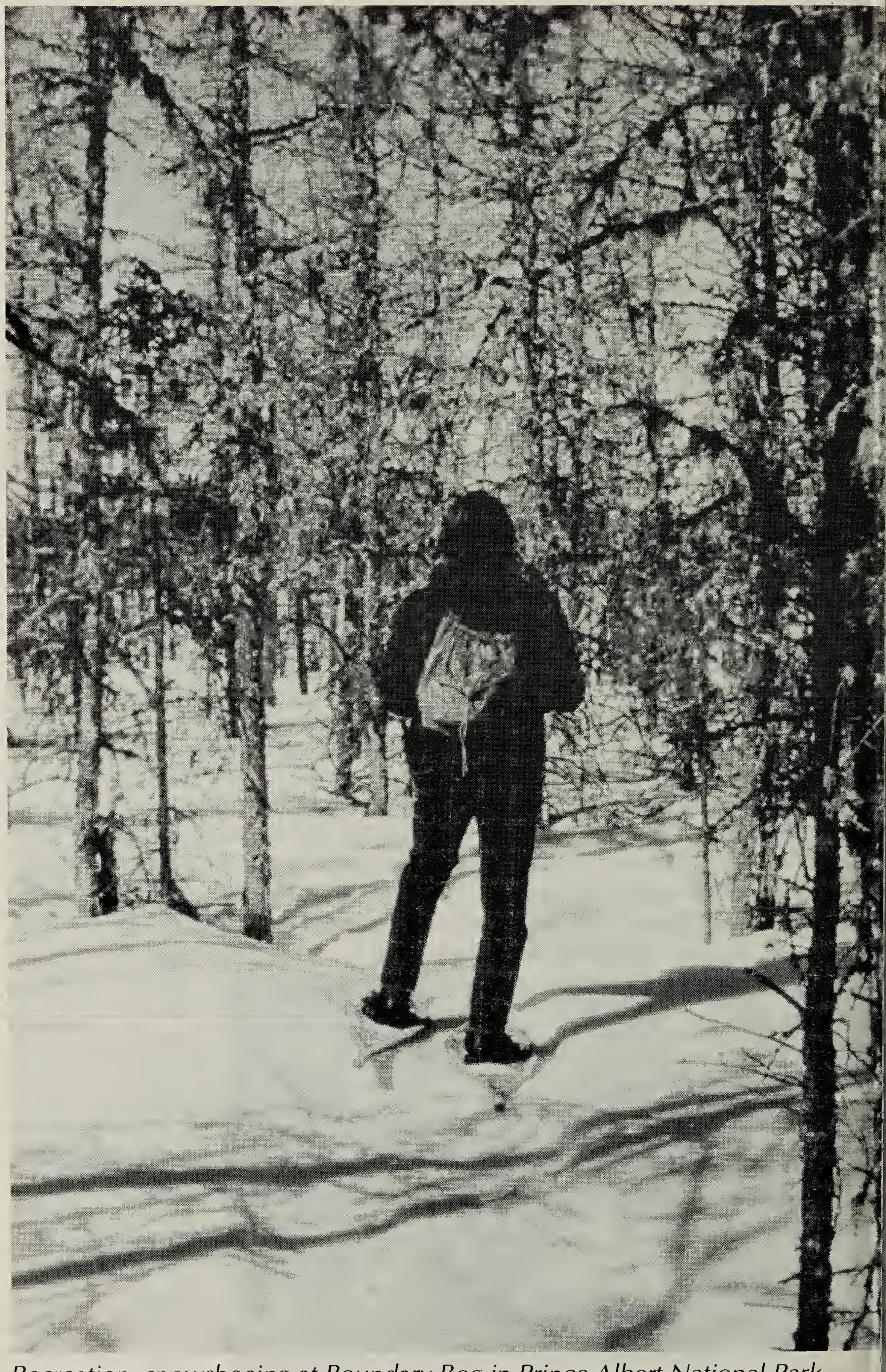
start with I would like to thank the
stry Department for giving me this
rtunity to speak concerning rare
ts. I would also like to compliment
Department for all their efforts
ugh inventory research to better
w the commercial forest of Sas-
hewan. Yours is a serious respon-
ty as guardians of the forest and I
ire the program for forest fire control
prevention, but as to clearcutting and
ulture there are some areas of con-

hoped that the birds and mammals
need a mature forest habitat will sur-
y moving into the remaining buffer
s around the lakes, and also into the
left by the harvest rotations. Limit-
hem to smaller local habitats will no
t mean greater losses by the preda-
of enemies. The well-being of every
ies needs to be continuously
tored with much caution and care.

Many of the plants of the forest thrive with disturbance and grow with profusion like never before in the open cuts and on bulldozed banks. Asters, goldenrods, wormwoods, Cut-leaved Ragwort, Tall Lungwort, Fringed Bindweed, Fireweed and Pea-vine, and some of the grasses and sedges burst forth like the glory of a botanical garden. (Introduced weeds from the farmlands also get established into the skidways, but they generally disappear as the area is reforested.) A lot of people welcome this profusion of growth for what was once mossy woods is providing food for the game.

The area of concern is the rare and delicate species that need cool moist woods to survive. There are 1700 to 1800 species of vascular plants in Saskatchewan. Of the native species 298 were listed as rare in the book "The rare vascular plants of Saskatchewan" (1979: Maher, Argus, Harms and Hudson). In the last 10 years about 10 new species have been found. The rare native plants of Saskatchewan total well over 300, which is about 6% of our total plant species. Of these rare species 88 grow in the commercial forest and about 33 of

ewa (Chimaphila umbellata) is found in Cypress Hills and tered locations in the forest. G.J. Smith



Recreation, snowshoeing at Boundary Bog in Prince Albert National Park

D. kes

m depend upon a forest canopy for stence. The Cypress Hills are of special anical interest for many Rocky Moun- n species are found there. On the other d the eastern side of the commercial st has many eastern species that are reme outliers from their normal range. main areas are Duck Mountain, Por- ine and Pasquia Hills, with some cies even extending to the Cub and pawekka Hills.

hen we discover a new plant species he province people ask questions like here did it come from? Did the birds y the seed? It is true that seeds are ad by wind, water and living crea- s, but in many cases when it comes to plants they were always there in that cial habitat as survivors of the past. y have come down to us through -glacial floods, great climatic chan- and many ravaging forest fires that le them even more local and rare than , while the hardier common species have adapted themselves to these ges have returned and replenished selves again and again. A number of are species are already extirpated in e of the states of the U.S.A. With the ods of clearcutting and silviculture a slogan — "Forever Forests," I would to ask "how many of these rare plant ies will be here forever?"

me of the most delicate plants are the ids. Of the 21 species found in the son Bay area 10 are rare in Sas- ewan and 7 are protected in Canada deral law, requiring export permits. of these orchids disappear when rbance and clearcutting come to the mossy woods.

ne might ask why we don't move plants out of the way of the logging try and establish them somewhere This could be done in some extreme , but whenever you move plants are no longer in a native condition hey become introductions. Let me ask "should all the elephants be in the zoos and none left in the jungles?" Again someone might say these rare species can survive in the parks. That is a good notion, but sad to say many of the rare species do not occur in the parks simply because the main object in choosing an area for a park has recreation and sports in the forefront.

As guardians of the forest I feel that we have a serious responsibility for the well-being of every species. Along with timber harvest it is of great benefit for the rare to survive and be protected where necessary. This is of great importance to the Forestry Department by showing the public that along with this all out harvest

Dragon-mouth Orchid or Swamp Pink (Arethusa bulbosa) *Chris Adam* we are protecting special areas of concern. These areas are also of great benefit in the field of tourism which continues year by year while you wait another 100 years for the next forest to grow up for reharvest. It will be very sad if we realize too late, after many species are extirpated, that we should have done something to save them. This would be something like the tourists that were in Japan recently, and while in a beautiful park they remarked about the lovely singing of the birds. They were told that it all came over the loudspeakers since the birds had disappeared years before.

I have guided several botany tours in the Hudson Bay area and have found the response overwhelming. In three days we would go from the Pitcher Plant bog at Greenbush, the Bainbridge Canyon in the Pasquia Hills, the Nitenai River Salt Marsh to the Rendek Elm Forest and the mossy, ferny woods of Brockelbank Hill, which is the highest point in the Porcupine Hills. These special spots are valuable and important.

I hereby appeal to the Forestry Department to make an amendment to the forestry act that will establish *a rare plants protection policy*; that environmental impact studies be done in special areas where rare species are endangered by clearcutting, and the most vital of these special areas be protected and set aside, so these rare understory species that depend on the forest canopy, can continue to exist in Saskatchewan.

Special rare plant areas in the commercial forest

CANDLE LAKE — 15 species of rare Saskatchewan plants including 2 subarctic species

AMISK LAKE — limestone cliffs with 26 species of rare Saskatchewan plants

CUMBERLAND DELTA — mostly unbotanized; large areas of sodium chloride
marshes. The only known Saskatche
locality for three ocean salt m
species.

PASQUIA HILLS — 36 species of
Saskatchewan plants. Many eas
species, as well as some sub-arctic
western species.

PORCUPINE HILLS — Brockel
Hill and north slope — 29 species of
Saskatchewan plants. This area con
the only Saskatchewan sites known
species of plants.

Macdowall Forest

PROPOSED MACDOWALL FO
AND BOG NATURAL AREA — fores
bog areas between C.N.R. tracks an
Farlane Creek support 15 speci
provincially rare vascular plants.

Rare plants hot spots

It is recommended that the Fo
Department work very closely wit
botanist in these special areas.
local spots should be set asid
protected areas with no logging allo
Others could be logged using sp
care, and small equipment on m
trees only.

It is interesting to note that the are
parks have been chosen mainl
recreational purposes. It is sad to say
many of these rare plant species d
occur in the parks.

This article is [with only very m
modifications in organization]
presentation that was given to the For
Advisory Committee on 30 January 1
by the SNHS representative, Do
Hooper. The presentation also inclu
description of the habitat and status
sample of 12 provincially rare sp
and a list of 29 rare species that oc
the Brockelbank Hill area. Followin
the report that he gave to the SNHS d
tors at their next meeting.

O THE SASKATCHEWAN NATURAL ISTORY SOCIETY

ow that we have an opportunity to
e some input into the forest manage-
nt of Saskatchewan, the question
s what can we as a society do to
mote the conservation of natural his-
in the commercial forest?

t's take a fair look at the situation —
stry is the second most important
urce in Saskatchewan next to farming. The economy is on a downslide; 23,000 people are leaving the province annually. Employment and income are desperately needed to bolster up the economy. Forestry at present creates 7,131 jobs annually, and the city of Prince Albert is in the heart of the operations and it has a stunning debt-load of millions of dollars. Do you think for one minute that we are going to do much to change the

forest

K. Strange

policy of the forestry department who have dedicated themselves to a clearcut harvest of the commercial forest which extends from Sandy Bay, La Ronge and Buffalo Narrows, southward? For the central block which is being harvested for Weyerhauser it is all clearcutting using every species of tree — birch, Balsam Poplar, Balsam Fir and all (formerly these species were mostly left as undesirable, and that was good for it left some places of refuge for the wild creatures. Now everything is cut, for it seems to make more economic sense to harvest all and not to waste. Then also everything is out of the way to practise silviculture by ripping up the ground and planting a new forest.

With the plant at Prince Albert, one at Meadow Lake and another one for the eastern block, to be probably built at Nipawin, the entire commercial forest is slated for a complete pulping harvest. They only cut out patches here and there each year, to give the wildlife a fair chance in the remaining forest. One doesn't have to be very far-sighted to see that with this kind of rotation harvest, and the growing world's demand for more and more pulp, that in about 30 years the majority of our forest will be reduced to young growth. The question arises — how will this affect the species of plants and animals that depend on a *mature* forest for existence? They say that they have Prince Albert National Park right in the heart of the forest, in the central part of the province. I say to this — what about other special ecological areas that are not covered by the National Park, like the Cumberland Delta and the Wapawekka, Pasquia and Porcupine Hills, which contain eastern species that are not found in the Prince Albert National Park? I firmly think that we need to insist that an environmental impact study be done in these special areas where there are no less than 12 species of very rare plants that are limited mostly to the eastern commercial forest of Saskatchewan, and depend on the forest canopy for eir continued existence in Saskatch n. The prime sites in the above named as should be set aside and protected N W before it is too late.

I guess that the described situati is beginning to sound like Snerd an he Raccoons. The purpose of the Adv ory Committee is to:

1. Provide feedback from the vari s forest user groups, special interes groups, and the general public.

2. The committee shall bring to th attention of [these groups] the pote al problems as perceived by the pub and recommended possible solut s to these problems.

3. The committee shall make rec mendations only and is not a decision-making body.

4. The proceedings of the Forestr dvisory Committee are confidentia and not for public information.

I hereby make an appeal to you, t if you have any suggestions, and sol ons to problems in forest harvest, nd management, that you submit them me in writing. We are looking for answ to the situation and your help is muc appreciated.

Thank you,

From your representative of the Fo stry Advisory Committee

Donald F. Hooper, Box 40 So ne, Saskatchewan. S0E 1N0 Phone 06) 278-2611

8th ANNUAL SASKATCHEWAN HRISTMAS BIRD COUNT—1989

mpiled by WAYNE C. HARRIS, Box 414, Raymore, Saskatchewan. S0A 3J0

he 1989 count, though not as impres- e as that of the previous year, was bably more typical of a Saskatchewan ristmas count. The weather just prior the count period (16 December to 3 uary) was seasonal to mild but begin- g on the first day of the count period peratures plummeted and remained re for more than a week. During this d snap temperatures reached -50°C king counting conditions difficult and lting in the disappearance of many of lingering species that counters had n hoping to get on their counts.

total of 78 counts were carried out year, reporting 78 species and 87,349 viduals. This was six less counts than year and 22 species less than last 's record 100 species. There was one species reported, a Ring-necked k at Crooked Lake. This brings the all list to 146 with 6 additional species rded during count period for an over- tal of 152 species reported during the ears.

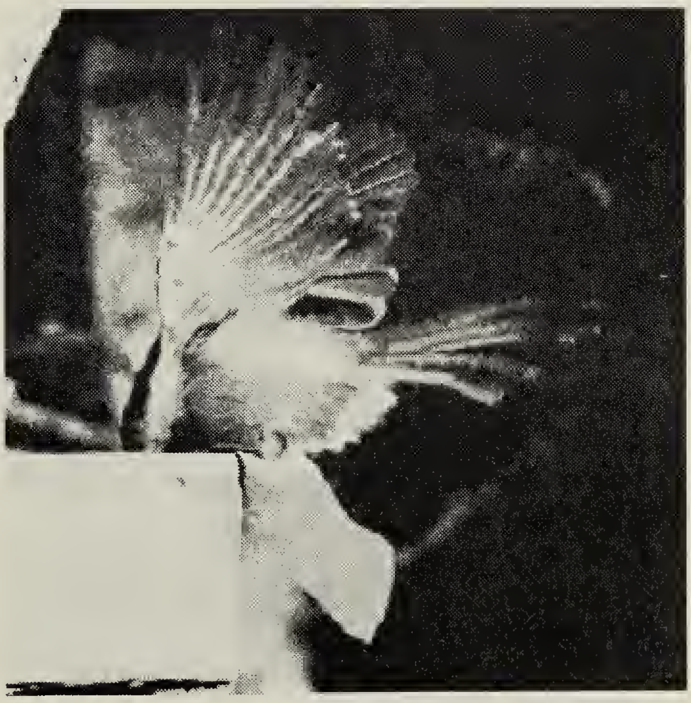
is year the greatest variety of species reported on the Fort Walsh count the Cypress Hills with 39 species. was followed by Fort Qu'appelle and atoon with 35 and Regina with 34.

ere was only one new high count rded this year; the 137 Ring-necked sants on the Grasslands National count exceeded last year's record 90 l Marie. There were several other es counts which tied previous highs hese all involved only one or two iduals.

s year saw an invasion of winter es with some of the best counts reported in several years being reported for Pine Grosbeaks, Common and Hoary Redpolls. The species which showed the greatest declines were those that were most likely affected by the cold weather. Most notable among these were the much reduced numbers of Golden-crowned Kinglets and Brown Creepers.

Following this introduction is a list of counts and the names of those who participated in each count. Although the 518 people who participated this year is less than last year, the average number per count remained the same. Table 1 provides details of the weather conditions for each count and the coverage on each count.

The results of this years count are presented in Table 2 where those most frequently found species are found. Table 3 presents those species recorded five or fewer times and Table 4 those birds unidentified to species.



Black-capped Chickadee *Wayne Shiels*

COUNT AREAS and PARTICIPANTS

(Names of compilers are in italics. Numbers of participants on each count are in parentheses following the observers)

1. ABERNETHY-KATEPWA. Ron Bittner, Phyllis Bordass, Ron Hooper, Alice Laing, *Joy McKen,* Norman McKen, Wanda Stueck. (7)
2. ARCHERWILL. *Elaine Radwanski*; FEEDER WATCHERS: Ed Radwanski, Mina Bilawchuk, Bill Carlson, Sharren Carlson, Perry Hnetka, Audrey Hnetka, Annette Kozak. (8)
3. BANGOR. *Jean Hilton,* Sheila Popowich. (2)
4. BETHUNE. Bevan Laing, *Doug Laing,* James & Vera Laing. (4)
5. BIGGAR. Kelly Foster, Bob Lund, *Guy Wapple,* Marguerite Wapple, Sandra Wapple. (5)
6. BIG MUDDY LAKE. Martin Bailey, *Carol Bjorklund,* Paul Chytyk, Bob Ewart, Wayne Harris, Bob Luterbach, Wayne Neily. (7)
7. BIG QUILL LAKE. *Wayne Harris.* (1)
8. BIRCH HILLS. Marg Mareschal, *Moe Mareschal,* Don Weidl. (3)
9. BJORKDALE. *Viola M. Smith.* (1)
10. BROADVIEW. *Dave Chaskavich.* (1)
11. BROMHEAD. David Bailey, Martin Bailey, *Carol Bjorklund.* (3)
12. CANDLE LAKE. Bronwynn Sarich, *Burke Korol.* (2)
13. CARRAGANA (1). Stan Back, Les Baker, Glen Hodge, *Donald Hooper,* Keith Larwood. (5)
14. CARRAGANA (2). Lavonne Back, *Margaret Back, Stan Back,* Agnes Chapman, David Chapman. (5)
15. CROOKED LAKE. *Ed & Dorothy Skene.* (2)
16. DALMENY. Brita Sperling, Camille Sperling, *Loyd Sperling.* (3)
17. DEVILS LAKE. *Tom Harper.* (1)
18. DILKE. *Margaret Belcher,* Ken S. McA , Bertha Wilson. (3)
19. DUVAL. Enid Cumming, Joe Materi, D n Nernberg, Iain Richardson, *Lloyd S l,* George Herber. (6)
20. ENDEAVOUR. *Norman Harris.* (1)
21. FORT QU'APPELLE. Bill Bordass, Ph s Bordass, Ethel Cockwill, Doug Evans, er Hooper, *Ronald Hooper,* Alice Laing, s Lamontagne, Don McDougall, A n Mlazar, Paul Paquin, Lorne Rowell, n Simmonds, Eileen Smith, Keith Ste s, Dorothy Williams. (16)
22. FORT WALSH. Martin Bailey, C ol Bjorklund, Dixie Black, Paul Chytyk, b Ewart, Anne Harris, Valeri Harris, W e Harris, Sheila Lamont, Brian Olson, W s Parsonage, Wayne Renaud, Stan Sha k, Mark Todd, *Guy Wapple,* Robert Wa e. (16)
23. GARDINER DAM. Anne Harris, V ri Harris, Wayne Harris, Sheila Lam t, Wayne Renaud, *Guy Wapple,* R rt Wapple. (7)
24. GLAMIS-WISETON. *Greville L. Jones*
25. GOOD SPIRIT LAKE. *Bill Anaka,* J e Anaka, Beverly Templeton, Julia V vwchar. (4)
26. GOVENLOCK. Martin Bailey, C ol Bjorklund, Paul Chytyk, Bob Ewart, A e Harris, Valeri Harris, *Wayne Harris,* S la Lamont, Brian Olson, Wayne Renaud, n Shadick, Mark Todd, Guy Wapple, R rt Wapple. (14)
27. GRAND CENTRE - PIERCELAND. le Dolynny, Jessica Piecharka, *Frank* y, Patrick Roy, Ryan Roy, Shelly Turner
28. GRASSLANDS NATIONAL PARK. ul Chytyk, *Wayne Harris,* Bob Luterbac 3)
29. GREENWATER PROV. PARK. Les B er, Joyce Chimko, Herman Duerksen, D en Forbes, *Donald Hooper.* (5)

HUMBOLT. *Ed Brockmeyer*, Mike Volk.
2)

INDIAN HEAD. Betty & Cecil Ashmore,
Coral, Margot & *Vic Beaulieu*, B. Bosgoed,
Roger Gray, Gordon Howe, Helen King,
Bruce, Clara, Erin & Richard Neill, Dora
Nichols, Doris Pals, Lorne Scott, Fred Skin-
ner, Nancy Skinner, Linda Skinner, Joyce
Skinner, Anna & Gordon Willerth. (22)

KAMSACK. Grace & George Bernhard,
Donna Dewores, Lyinda Dewores, Fred
rhart, Bert & Doris Franklin, Anita Kloch-
o, William Koreluik, Cusie May, Ray Pen-
el, Jess & Dallas Rezansoff, *Isabel Ritchie*,
Metto Rosowsky, Earla Rudd, John Solman,
lenor Sookocheff, Ted Wallace, Barb Wil-
on. (20)

KELVINGTON. Elaine Finnie, Pat Finnie,
ob Ruston, Chet Sloan, *Dianne Sloan*,
raham Sloan, Marguerite Sloan. (7)

ENASTON. *P. Lawrence Beckie*. (1)

ILWINNING. *Ed Driver*, Marg Driver. (2)

KUTAWAGAN LAKE. Anne and Valeri
arris, *Wayne Harris*, Sheila Lamont. (4)

A RONGE. *Jim Paul*, Lorie Ann Paul. (2)

AST MOUNTAIN LAKE. Anne and Valeri
arris, *Wayne Harris*, Sheila Lamont. (4)

EADER. *Daisy D. Meyers*. (1)

EASK. *Alvin G. Lasich*. (1)

VELONG (1). M. Carlson, *E. M. Robin-*
n. (2)

VELONG (2). *Sarah Pavka*. (1)

OON LAKE. *Penny Davis*, Frank Scott.(2)

USELAND. Estelle Finley, *Kim Finley*, Bill
olton, Donna Holton, Travis Holton, Bev
oneker, Brent Honeker, Dustin Honeker,
rman Honeker, Levi Honeker, Alexis
rtfield, Katrina Martfield, Joe Rozzlein.
)

45. MAIDSTONE. Anne and Valeri Harris, *Wayne Harris*, Dan Lamont, Sheila Lamont, Tom Lamont. (6)

46. MARSDEN. *Lois Wooding*, Eileen Graham. (2)

47. MATADOR. *Jim Romo*, Cindy Romo. (2)

48. MELVILLE. Donna Alberts, *Marion MacLean*, Robert Wotherspoon, Ross Wotherspoon. (4)

49. MOOSE JAW. Pat MacBrodie, Riel & Merran Aldred, Edith Bell, Doug & Helen Brunsdon, Ben & Isabelle Cruise, John Docherty, Joan & John Finn, Doug & Pat Francis, Edward, Hartley, Arthur & Tristan Fredeen, Kerry Hanley, John Kern, Cy & *Leith Knight*, Kay Kreuger, Catherine Letkemann, Connie & Hugh McIntyre, Richard & Wilma Pickering, Gavina Reekie, Gus Sagal, Sheina & Gordon Wait, Ed & Grace Walker, George Willatt. (33)

50. NIPAWIN. Carmelle Altrogge, Harvey & Dave Christiansen, *Joyce Christianson*, Shannon Christiansen. (4)

51. PIAPOT. *Raymond Olson*. (1)

52. PIKE LAKE. Jill Annweiler, Paul Coutu, Anna Fornal, Mary Gilliland, Bob Girvan, *J.B. Gollop*, Mike Gollop, Ron Jensen, Peter Jonker, Joyce Anton, Menno Nickel, Frank Roy, Stan Shadick. (12)

53. PREECEVILLE. *James H. Purdy*. (1)

54. PRINCE ALBERT (1). *Frank & Elsie Morton*. (2)

55. PRINCE ALBERT (2). Myron Barton, John Burt, Pam Burt, Carman Dodge, Joe Graumans, Ham Greenwood, J. Greenwood, *Genevieve Greif*, Margret B. Gilmour, Joanne Marchand, Cody Watt. (11)

56. PRINCE ALBERT NATIONAL PARK. Arden Albert, Marilyn Anions, Anna Bekalay, Susan Carr, Jana Curran, Lisa Gerstna, Christine Hedgecock, Jim Helm, Doug Hodgins, Arnold Janzen, Justin McArthur, Patrica Moffatt, *Bradley Muir*, Laura Muir, Keith Pillar, Corey Rolles, Merv Syroteuk, Jeff Weir. (18)

57. RAYMORE. Anne and Valeri Harris, *Wayne Harris*, Sheila Lamont. (4)

58. REGINA. Sandy Ayer, Jessie Bailey, Martin Bailey, Keith Barr, Margaret Belcher, *Carol Bjorklund*, Paul Chytyk, Charlene Grund, Enid Cumming, Stu Dechka, Jim Elliott, Bob Ewart, Sandra Ewart, Lloyd Gamble, Margot Gilligan, Karen Herriot, Trevor Herriot, Phyllis Isley, Bob Kreba, Ferne Lawrence, Mary Love, Margo Lowe, Christine MacDonald, John Meldrum, Ron Meyers, Dean Nernberg, John Pollock, Brian Rainey, Don Richan, John Richan, Gillian Richardson, Trevor Richardson, Karyn Scalise, Lori Skulski, Frank Switzer, Ian Switzer, Jon Triffo, Jane Wilhelm, Pierre Wilhelm, Mariella Wilhelm, Steven Zivirsky. (41)

59. ROCKE PERCEE. *Ray Belanger*, Dick Gutfriend, Wally Nicholson, Nick Postey, Stewart Stairmand. (5)

60. ROUND LAKE. *Doug Francis*, Pat Francis, Joe Grimeau, Laura Grimeau, John Trembley. (5)

61. SALTCOATS. *Robert Barnhart.* (1)

62. SASKATOON. Norma Allen, Jill Anweiler, Juhachi, Kengo, Mika, Riko, Sumiko & Yyka Asai, Garth, Joyce & Robert Besant, Julia Maeve, Mark, & Paul Bidwell, John Bond, Nigel Caulkett, Anne Dzus, Brenda Flavelle, Anna Fornal, Colleen Gerwing, *Mary Gilliland*, Bob Godwin, Bernard Gollop, Michael Gollop, Carl & Sandra Hampel, John Hanbidge, Ron Jensen, Brian Johns, Kate Johnson, Burke Korol, Ken Lumbis, Don McRobbie, Kathy Meeres, Cathryn Miller, David Miller, Lynn Oliphant, Evelyn Paterson, Joe Sondershausen, Lana Stead, Jeff Turple, Koren Vangool, Heather Wagg, Jim Wood; FEEDER WATCHERS: Beaver Creek Conservation Centre, Ruth Crickton, Jan & Stephen Earl, Martin Gerard, Marshall Gilliland, Julie Jensen, Harv Lane, Audrey McKibben, Menro Nickel, Jim Smart, Vivian Thorpe, Bernardette Vangool; COUNT PERIOD ONLY: Mary Houston. (56)

63. SCOTT. Wayne Neily, *Guy Wapple.* (2)

64. SKULL CREEK. *James Bennetto*, Ray Bennetto, Bob Eccleston, Marjorie Mann. (4)

65. SNOWDEN (1). Irene Hagel, *Karen H l.* (2)

66. SNOWDEN (2). Elodie Hagel, K n Hagel, Deni Messer, Iain Richard ı, *Lloyd Saul.*(5)

67. SOMME. Edwin Billeter, Sharon B ı, David Black, Florence Chase, *Dc ld Hooper,* Margaret Hooper. (6)

68. SPINNEY HILL. *Ed Driver*, Paul Stever 2)

69. SPRING VALLEY. Allan & Bryan Bo n, *Flossie Bogdan* & Larry Bogdan, :k Bodgan, Dean Goian. (6)

70. SPRUCE HOME. *Sharon & Tom Dic* ?)

71. SQUAW RAPIDS. Penny Dyck, *W* ne *Harris*, Burke Korol, Sheila Lamont, ıy Wapple, Robert Wapple. (6)

72. TISDALE. *Joyce Mohr.*(1)

73. WAUCHOPE. Blain Hjertaas, *Dale* er*taas*, Paule Hjertaas, Warren Hjertaa I)

74. WEYBURN. Leo Belanger, L se Belanger, *Ray Belanger*, Greg Bobbitt orman Flatten, Dick Gutfriend, Betty h, Wally Nicholson, Nick Postey, Jerry ır, Heather Stairmand, Stewart Stairr ıd, Doyle Thomas, Glenn Vinge. (14)

75. WHITE BEAR. Floyd Jordheim, ıry Jordheim, Laine Jordheim, *Sig Jordhe* (4)

76. WHITE BEAR LAKE. Ray Belanger, *G. Bobbitt*, Ross Douglas, Dick Gutfrier (4)

77. WHITEBEECH. David Finnie da Wotherspoon, *Lindsay Wotherspoo* 3)

78. YORKTON. Bill Anaka, Joyce Anaka, ce Baines, Richard Burback, Rick Edmer on, Art Griffith, Gregg Hougson, *Warrer* er*taas*, Marilyn Lepp, Lorne Lepp, R ard Sitz, Ed Skene, Dorthy Skene, Irene th, Ken Smith, Beth Turberfield, Julia wchar, Harold Wilkinson. (18)

ble 1. COUNT COVERAGE AND WEATHER CONDITIONS.

COVERAGE AND CONDITIONS UNT	KM BY VEHICLE	KM ON FOOT	HOURS VEHICLE	HOURS ON FOOT	HOURS FEEDERS	TEMP. MAXIMUM (°C)	TEMP. MINIMUM (°C)	WIND MAXIMUM	WIND MINIMUM	SNOW MAXIMUM (cm)	SNOW MINIMUM (cm)	SKY CONDITIONS
RNETHY-KATEPWA	140	.5	4.5	.5		-30	-35		0	20	30	clear
HERWILL	39	1	2.5	1	5	-2			5		10	clear
GOR	100	7.5	7	2	1	+1	-10	30	20	12	10	clear
IUNE	75	1	4	.5		-5	0	10	0	2.5	0	mostlyclear
AR	143	10	6	4.5	1	-9	-14	30	16	10	0	overcast, light snow
MUDDY LAKE	292	8	16	6.5		-2	-8			10	2	mostly cloudy
QUILL LAKE	250	1	4	1		-41	-46	20	0	10	6	clear
H HILLS	137	3	5.8	1.67	0.5	-2	-10	30	0	40	10	partly cloudy
DALE					1	-14						overcast
ADVIEW	80	2.5	3	2		-3	-5	30	20	5	1	overcast fog
MHEAD	132	1	8	1		-6	-11	32	16	1	0	partly cloudy
OLE LAKE	114	1.5	6	1		-16	-17	20	4	35	15	overcast light snow, clearing
AGANA (1)	15	2	.5	1	2.5	0	-5	30	20	35	30	mostly cloudy
AGANA (2)	40	2	3	1.5	6					38	30	partly cloudy, mod. snow
OKED LAKE	17.8	3	1	5		-5	-5	0				heavy overcast
IENY		8		4.5		-6	-7	30	20	40	3	partly cloudy
LS LAKE		8				5		20	16			clear
	100	4	3.5	2		0	-10	10	0	3	0	partly cloudy
L	150	10	6	3	0.5	-9	-14	17	7	25	0	overcast, light snow
AVOUR	21	7	1	5		-10	-24	5	0	32	25	partly cloudy
QU'APPELLE	135	3	9	3	10	-18	-22	5		10	6	mostly cloudy, light snow
WALSH	169	80	22	40	1	-12	-14	40	0	45	3	mostly cloudy
INER DAM	236	16	11	8		-34	-38	10	0	15	10	clear, ice fog
IS	50	4.5	2	2		0	-4	10	2	15	5	partly cloudy
D SPIRIT LAKE	110	5	5	3.5	1	-3	-7	30	20	28	10	mostly clear
NLOCK	150	29	18	5		+3	0	50	10	10	0	partly cloudy
D CENTRE	120	2	6.5	1	.5	+5	+2	20	8	35	15	partly cloudy
SLAND N. P.	165	3	7	2		-2	-5	10	0	10	0	overcast, mod. snow, heavy fog
NWATER P. P.	60	1	1.5	1	2	0	-5	30	20	35	30	mostly cloudy
BOLDT	85	1	3	1	1	+4	+2	12	8	15	8	overcast, clearing
N HEAD	135	9	15	5.5	11	-2	-5			10	4	mostly cloudy, light snow
ACK						-30	-41	0		50	45	fog, clearing
NGTON	67	4.5	3	1.5	5	+3	-7	0	0	41	35	overcast, light freezing rain
TON	34	2	2	2		-10	-15	15	0	25	20	mostly cloudy
NNING	96	0.5	5.5	0.2		-6	-8	25	10	50	1	
VAGAN LAKE	160	3	6	2		-3	-5	30	10	30	20	clear
NGE	110	3	5	1	1	-2	-10	18	6	50	40	overcast, light snow
MT. LAKE	216	5	5	3		+1	-3	30	10	15	5	clear
R	60	4	2	2		+4	-2	4	0	3	2	clear
	35	3	2	1.5	.5	-10	-20	15	5	20	15	
NG (1)	110	4	7	1	1							
NG (2)		12		2	6	-4	-20					partly cloudy
LAKE	40	1	2	.5	2	-6	-8	20	10	10	0	overcast
AND	145	15.5	4	5	2	+6	+4	15	5	29	2	partly cloudy
TONE	120	4	10	4	2	-3	-10	30	0	30	10	overcast
EN	92	2	7	1	?	8	5	5	3	10	0	mostly clear
OR	80	4	5.5	1.5		-10	-15	20	5	15	2	mostly clear
LE	15	2	1	2	3	-6	-25	10	0	25	5	mostly clear
E JAW	166	18	10	10	3	5	3	14	8	T	0	mostly clear
N	16	3	.5	1.5	3	-2	-5	30	20	60	30	overcast
	20		3			0	-5	15	5	3	0	mostly clear
KE	248	54	17.3	20.9	1	-12	-14	22	8	15	3	overcast, light snow
VILLE					6	-2	-10	?	0	6	4	partly cloudy
ALBERT (1)					6	-30	-46					heavy fog, mostly clear
ALBERT (2)	235	6	12	2.5	6.5	-4	-10	30	10	20	5	overcast, light snow
ALBERT N.P.	83	67	5	26.5	2	-15	-21	10	0	20	15	mostly clear
RE	237	8	7	4	2	-31	-45	10	0	30	10	clear
	787	41	41	18.5		+5	-8	30		3	1	partly cloudy
PERCEE	75	2	2.5	1		0	-4	15	10	4	2	partly cloudy
LAKE	97	.5	5.5	1	7	-4	-12	15	0	10	0	mostly cloudy, mod. snow
ATS	64		3		.5	2	2	20		25	5	overcast
OON	96.4	70.5	60	29	50	4	2	48	26	10	7.5	mostly clear
	164	11	6.5	6		-10	-19	30	10	10	0	partly cloudy
REEK	125	14	14	6	3	+10	0	30	20	12	0	mostly clear
EN (1)	100	3	4.5	2	1.5	-17	-20	0		35	2	clear
EN (2)	96	1.5	4	0.5	1	-12	-20	10	0	43	3	partly cloudy
	70	1	4	1	4	-20	-23	3	0	30	20	partly cloudy, light snow
HILL	100	0.8	5.2	0.5		-6	-9	30	10	45	0	mostly clear
VALLEY	90	7	3.5	1.5	1	-10	-20	20	15	5	0	partly cloudy
HOME	15		.5		6	-5	-12	30	10	25	10	overcast, mod. snow

Table 1. COUNT COVERAGE AND WEATHER CONDITIONS

COUNT / COVERAGE AND CONDITIONS	KM BY VEHICLE	KM ON FOOT	HOURS VEHICLE	HOURS ON FOOT	HOURS FEEDERS	TEMP. MAXIMUM (°C)	TEMP. MINIMUM (°C)	WIND MAXIMUM	WIND MINIMUM	SNOW MAXIMUM (cm)	SNOW MINIMUM (cm)	SKY CONDITIONS
SQUAW RAPIDS	140	26	10	8		-21	-46	50	10	50	20	overcast, light snow
TISDALE	85		1.5		2	-5	-20	20	5	10	8	mostly cloudy
WAUCHOPE	130	16	4	6	1	+3	-1	30	15	12	2	overcast, clearing
WEYBURN	296	4	8.8	2	1	-15	-20	15	10	5	2	partly cloudy
WHITE BEAR	42	30	1	10		-1	-14	5	0	12	0	
WHITE BEAR LAKE	188	3	5	1.5		-33	-36	25	10	9	T	clear
WHITEBEECH		2		1	5	0	-2	10	5	30	20	mostly cloudy
YORKTON	120	10	4	5	2	-20	-20	20	5	15	7	overcast, light snow

Sharp-tailed Grouse near Sylvania, Saskatchewan *Wayne S*

CATION OF COUNTS

ERNETHY-KATEPAWA
CHERWILL
NGOR
THUNE
GGAR
G MUDDY LAKE
QUILL LAKE
CH HILLS
ORKDALE
ROADVIEW
ROMHEAD
ANDLE LAKE
ARRAGANA (1)
ARRAGANA (2)
ROOKED LAKE
ALMENY
EVILS LAKE
ILKE
UVAL
NDEAVOUR
ORT QU'APPELLE
ORT WALSH
ARDINER DAM
LAMIS
OOD SPIRIT LAKE
OVENLOCK
27.GRAND CENTRE
28.GRASSLAND N.P.
29.GREENWATER P.P.
30.HUMBOLDT
31.INDIAN HEAD
32.KAMSACK
33.KELVINGTON
34.KENASTON
35.KILWINNING
36.KUTAWAGAN LAKE
37.LA RONGE
38.LAST MOUNTAIN LAKE
39.LEADER
40.LEASK
41.LIVELONG (1)
42.LIVELONG (2)
43.LOON LAKE
44.LUSELAND
45.MAIDSTONE
46.MARSDEN
47.MATADOR
48.MELVILLE
49.MOOSE JAW
50.NIPAWIN
51.PIAPOT
52.PIKE LAKE
53.PREECEVILLE
54.PRINCE ALBERT (1)
55.PRINCE ALBERT (2)
56.PRINCE ALBERT N.P.
57.RAYMORE
58.REGINA
59.ROCHE PERCEE
60.ROUND LAKE
61.SALTCOATS
62.SASKATOON
63.SCOTT
64.SKULL CREEK
65.SNOWDEN (1)
66.SNOWDEN (2)
67.SOMME
68.SPINNEY HILL
69.SPRING VALLEY
70.SPRUCE HOME
71.SQUAW RAPIDS
72.TISDALE
73.WAUCHOPE
74.WEYBURN
75.WHITE BEAR
76.WHITE BEAR LAKE
77.WHITEBEECH
78.YORKTON

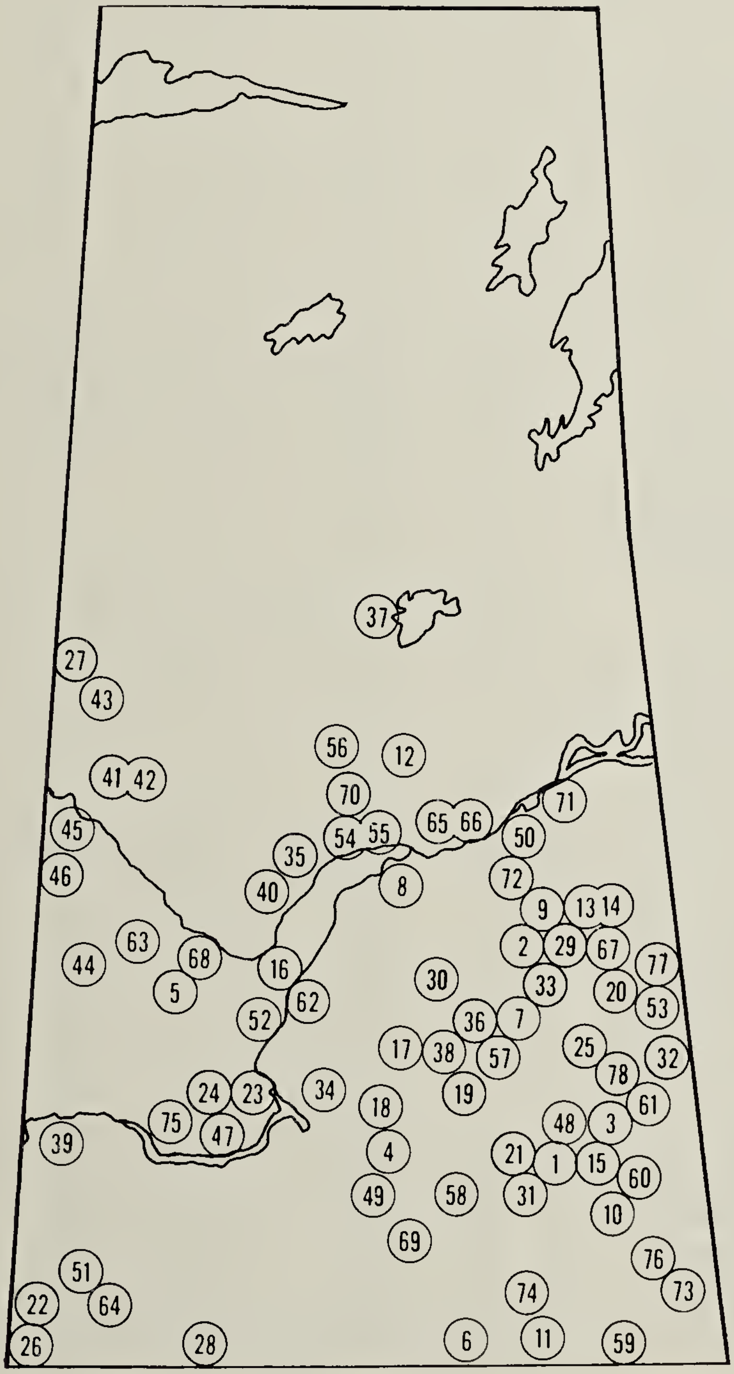


Table 2-1. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = high count for a species seen during count period but not on count day)

SPECIES / **LOCALITY & DATE**	1 ABERNETHY 18 Dec. 1989	2 ARCHERWILL 01 Jan. 1990	3 BANGOR 01 Jan. 1990	4 BETHUNE 29 Dec. 1989	5 BIGGAR 28 Dec. 1989	6 BIG MUDDY LAKE 29 Dec. 1989	7 BIG QUILL LAKE 20 Dec. 1989	8 BIRCH HILLS 30 Dec. 1989
MALLARD	8							
COMMON GOLDENEYE	1							
BALD EAGLE	1							
NORTHERN GOSHAWK		1						
GOLDEN EAGLE				1	1	6		
MERLIN				+1			1	
PRAIRIE FALCON								
GRAY PARTRIDGE	32	9	29	16	54	2	82	14
RING-NECKED PHEASANT	1					28		
RUFFED GROUSE	1	4	3					1
SHARP-TAILED GROUSE	43	8	22	6	57	26	7	6
ROCK DOVE	10	9	+3	12	31			46
GREAT HORNED OWL					2	5	1	2
SNOWY OWL	3			2	1		5	1
SHORT-EARED OWL								
DOWNY WOODPECKER	3	6	2		1	1	1	2
HAIRY WOODPECKER	3	2	4		2			2
PILEATED WOODPECKER		2						1
HORNED LARK						54	13	
GRAY JAY		2	+1					
BLUE JAY	1	11			7			4
BLACK-BILLED MAGPIE	32	14	29	18	88	61	23	41
COMMON RAVEN	4	9	4		+2		1	13
BLACK-CAPPED CHICKADEE	35	29	33		18	2	2	28
BOREAL CHICKADEE		+3						
RED-BREASTED NUTHATCH								
WHITE-BREASTED NUTHATCH	5	+2						
AMERICAN ROBIN	4							
BOHEMIAN WAXWING	92		+50		56	21	13	2
CEDAR WAXWING		+1		58				
NORTHERN SHRIKE					+1			
EUROPEAN STARLING					8		2	9
AMERICAN TREE SPARROW								
DARK-EYED JUNCO								
SNOW BUNTING	574	105	210	170	81	2	165	
RUSTY BLACKBIRD		5				1		
PINE GROSBEAK	35	22	2		2		14	16
WHITE-WINGED CROSSBILL								
COMMON REDPOLL	6	55	+1		149	67	35	177
HOARY REDPOLL	4	12	+20		1	11	2	10
PINE SISKIN					5			
EVENING GROSBEAK		59	2					45
HOUSE SPARROW	77	36	80	158	545	612	265	201
NO. INDIV. TABLES 3&4	3	0	1	0	14	18	0	0
NO. SPECIES COUNT DAY	25	20	13	8	19	16	17	20
NO. SPECIES COUNT PERIOD	27	23	18	9	21	16	17	20
NO. SPECIES TABLE 3&4	4	0	1	0	1	1	0	0
NO. INDIV COUNT DAY	978	390	420	383	1123	917	532	621

le 2-2. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
= high count for a species seen during count period but not on count day)

02 Jan. 1990	11 BROMHEAD 03 Jan. 1990	12 CANDLE LAKE 03 Jan. 1990	13 CARRAGANA (1) 30 Dec. 1989	14 CARRAGANA (2) 01 Jan. 1990	15 CROOKED LAKE 25 Dec. 1989	16 DALMENY 29 Dec. 1989	17 DEVILS LAKE 26 Dec. 1989	18 DILKE 27 Dec. 1989	**LOCALITY & DATE** **SPECIES**
					4				MALLARD
									COMMON GOLDENEYE
									BALD EAGLE
			+2						NORTHERN GOSHAWK
	2							+1	GOLDEN EAGLE
									MERLIN
									PRAIRIE FALCON
	19		+5						GRAY PARTRIDGE
	2								RING-NECKED PHEASANT
			1			13			RUFFED GROUSE
14	9		+6	+1	6	1		17	SHARP-TAILED GROUSE
14			1						ROCK DOVE
	5		+1					2	GREAT HORNED OWL
						+1		+1	SNOWY OWL
									SHORT-EARED OWL
1			1	1	2		2		DOWNY WOODPECKER
		4	1	1	1		2	1	HAIRY WOODPECKER
									PILEATED WOODPECKER
	183							+15	HORNED LARK
		14	2	2					GRAY JAY
		1	23	1			5		BLUE JAY
12	4	8	14	9	7	1	3	29	BLACK-BILLED MAGPIE
		79	80	2					COMMON RAVEN
6		22	37	2	24	4	14		BLACK-CAPPED CHICKADEE
		9	3						BOREAL CHICKADEE
									RED-BREASTED NUTHATCH
		1	4		2				WHITE-BREASTED NUTHATCH
									AMERICAN ROBIN
32				+4	8		30	20	BOHEMIAN WAXWING
									CEDAR WAXWING
									NORTHERN SHRIKE
								+8	EUROPEAN STARLING
									AMERICAN TREE SPARROW
									DARK-EYED JUNCO
0	2123		+12	+9		+100		1	SNOW BUNTING
1									RUSTY BLACKBIRD
9		8	1	+2	75	7		3	PINE GROSBEAK
									WHITE-WINGED CROSSBILL
	17	95	8		56			8	COMMON REDPOLL
	4	2							HOARY REDPOLL
									PINE SISKIN
		86	21		15				EVENING GROSBEAK
8	13		50		9	20		96	HOUSE SPARROW
0	1009	3	0	0	1	0	0	0	NO. INDIV. TABLES 3&4
9	12	14	15	7	13	6	6	9	NO. SPECIES COUNT DAY
0	12	14	22	12	13	9	6	13	NO. SPECIES COUNT PERIOD
0	2	2	2	1	1	1	0	0	NO. SPECIES TABLE 3&4
6	3390	332	247	18	210	46	56	177	NO. INDIV COUNT DAY

Table 2-3. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = high count for a species seen during count period but not on count day)

SPECIES / **LOCALITY & DATE**	19 DUVAL 28 Dec. 1989	20 ENDEAVOUR 31 Dec. 1989	21 FT. QU'APPELLE 16 Dec. 1989	22 FORT WALSH 16 Dec. 1989	23 GARDINER DAM 18 Dec. 1989	24 GLAMIS 26 Dec. 1989	25 GOOD SPIRIT L. 30 Dec. 1989	26 GOVENLOCK 17 Dec. 1989
MALLARD			76	11	3366			
COMMON GOLDENEYE			6		42			
BALD EAGLE				2	8			
NORTHERN GOSHAWK				2	1		3	
GOLDEN EAGLE				3	1			9
MERLIN			+1	+1				1
PRAIRIE FALCON				1				2
GRAY PARTRIDGE	24		+5	8	87	10	15	54
RING-NECKED PHEASANT			2	11				20
RUFFED GROUSE		+3	+1	1			1	
SHARP-TAILED GROUSE		+19	19	25	13	18	9	16
ROCK DOVE	7		16	4	87	30		1
GREAT HORNED OWL	5	2	+1	1	7	2	2	2
SNOWY OWL			+1		6	3		5
SHORT-EARED OWL				5				
DOWNY WOODPECKER		2	8	3	1	1	7	
HAIRY WOODPECKER	1	3	4	2	1		9	
PILEATED WOODPECKER		1					+1	
HORNED LARK	19			44	793			248
GRAY JAY		2	1					
BLUE JAY			9				5	
BLACK-BILLED MAGPIE	43	2	50	302	79	9	26	2
COMMON RAVEN		23	+2				8	
BLACK-CAPPED CHICKADEE	3	5	51	104	10		50	
BOREAL CHICKADEE								
RED-BREASTED NUTHATCH			2	1				
WHITE-BREASTED NUTHATCH			3				2	
AMERICAN ROBIN			20					
BOHEMIAN WAXWING	80		339	51			27	
CEDAR WAXWING	+35						5	
NORTHERN SHRIKE			+1	6				
EUROPEAN STARLING		3	+1	3	3		1	1
AMERICAN TREE SPARROW				28				2
DARK-EYED JUNCO				5				1
SNOW BUNTING	502	150	380	403	4667	80	7	3970
RUSTY BLACKBIRD			10	4				1
PINE GROSBEAK	30	6	28	140	12		4	
WHITE-WINGED CROSSBILL								
COMMON REDPOLL	123	1	191	458	185	4	4	
HOARY REDPOLL			+8	3	1		+3	
PINE SISKIN								
EVENING GROSBEAK			11				5	
HOUSE SPARROW	287	7	206	78	254	15	217	225
NO. INDIV. TABLES 3&4	30	0	3	179	183	0	0	24
NO. SPECIES COUNT DAY	14	14	24	38	24	10	20	20
NO. SPECIES COUNT PERIOD	15	15	35	39	24	10	22	20
NO. SPECIES TABLE 3&4	1	0	5	11	4	0	0	5
NO. INDIV COUNT DAY	1155	227	1416	1885	9807	171	427	4584

ble 2-4. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
= high count for a species seen during count period but not on count day)

RASSLAND N.P. 28 Dec. 1989	29 GREENWATER P.P. 30 Dec. 1989	30 HUMBOLDT 26 Dec. 1989	31 INDIAN HEAD 28 Dec. 1989	32 KAMSACK 19 Dec. 1989	33 KELVINGTON 27 Dec. 1989	34 KENASTON 25 Dec. 1989	35 KILWINNING 29 Dec. 1989	36 KUTAWAGAN LAKE 26 Dec. 1989	**LOCALITY & DATE** **SPECIES**
			9						MALLARD
									COMMON GOLDENEYE
									BALD EAGLE
	+1								NORTHERN GOSHAWK
3								1	GOLDEN EAGLE
									MERLIN
1									PRAIRIE FALCON
17		14	15	50	26	8	20	36	GRAY PARTRIDGE
137			1						RING-NECKED PHEASANT
	1	+1	5		13				RUFFED GROUSE
	+4	45	28	15	11	+3	9	17	SHARP-TAILED GROUSE
1		4		6		12	20		ROCK DOVE
		+1	1	1				2	GREAT HORNED OWL
			6	1		+1		3	SNOWY OWL
									SHORT-EARED OWL
	4	3	6	12	7			1	DOWNY WOODPECKER
	8	+1	8	14	8	1	2		HAIRY WOODPECKER
	+1			8					PILEATED WOODPECKER
285						9	3		HORNED LARK
	2			12					GRAY JAY
	19		4	28	9		2		BLUE JAY
70	1	11	63	17	14	11	13	32	BLACK-BILLED MAGPIE
	14			39	16		4		COMMON RAVEN
1	17	23	80	62	35	+1	7	4	BLACK-CAPPED CHICKADEE
				25					BOREAL CHICKADEE
		+2		4					RED-BREASTED NUTHATCH
	9		3	7	1				WHITE-BREASTED NUTHATCH
									AMERICAN ROBIN
		300	267	128	+10		3		BOHEMIAN WAXWING
			20						CEDAR WAXWING
1									NORTHERN SHRIKE
			6	1					EUROPEAN STARLING
2									AMERICAN TREE SPARROW
				4					DARK-EYED JUNCO
83	+8	400	1310	125	67	1	43	1216	SNOW BUNTING
									RUSTY BLACKBIRD
	8	3	25	72	6	1	2		PINE GROSBEAK
									WHITE-WINGED CROSSBILL
	14	+8	16	46	75	75	71	42	COMMON REDPOLL
				54	2		2	2	HOARY REDPOLL
				10					PINE SISKIN
	52			305	76				EVENING GROSBEAK
22	18	100	191	165	102	43	21	263	HOUSE SPARROW
1	1	0	2	6	5	0	0	0	NO. INDIV. TABLES 3&4
13	14	10	21	28	18	9	15	12	NO. SPECIES COUNT DAY
13	18	15	21	28	19	12	15	12	NO. SPECIES COUNT PERIOD
1	1	0	1	2	2	0	0	0	NO. SPECIES TABLE 3&4
24	168	903	2066	1216	473	161	222	1619	NO. INDIV COUNT DAY

Table 2-5. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = high count for a species seen during count period but not on count day)

SPECIES / **LOCALITY & DATE**	37 LA RONGE 26 Dec. 1989	38 LAST MT. LAKE 31 Dec. 1989	39 LEADER 24 Dec. 1989	40 LEASK 03 Jan. 1990	41 LIVELONG (1) 02 Jan. 1990	42 LIVELONG (2) 23 Dec. 1989	43 LOON LAKE 01 Jan. 1990	44 LUSELAND 26 Dec. 1989
MALLARD	2							
COMMON GOLDENEYE	1							
BALD EAGLE			1		1			
NORTHERN GOSHAWK					6			
GOLDEN EAGLE		2	2					
MERLIN								
PRAIRIE FALCON								
GRAY PARTRIDGE		144						49
RING-NECKED PHEASANT			15					
RUFFED GROUSE				1	4			
SHARP-TAILED GROUSE		18	2	+5	7			4
ROCK DOVE		40	7	+100		40		35
GREAT HORNED OWL		1	2		1			4
SNOWY OWL		5						2
SHORT-EARED OWL								
DOWNY WOODPECKER	1				6	8		2
HAIRY WOODPECKER	2	1			9	6	1	4
PILEATED WOODPECKER								
HORNED LARK		1						15
GRAY JAY	7				7		2	
BLUE JAY	3				10	10	3	2
BLACK-BILLED MAGPIE	4	68	34	1	24	2	7	38
COMMON RAVEN	105			1	24	2	7	
BLACK-CAPPED CHICKADEE	12		1		45	20	2	16
BOREAL CHICKADEE	3				5		2	
RED-BREASTED NUTHATCH					4	2		
WHITE-BREASTED NUTHATCH					7	4	1	
AMERICAN ROBIN								
BOHEMIAN WAXWING						+6		4
CEDAR WAXWING								
NORTHERN SHRIKE								
EUROPEAN STARLING		2						
AMERICAN TREE SPARROW								
DARK-EYED JUNCO	2							
SNOW BUNTING		480		+50		+20	200	26
RUSTY BLACKBIRD								
PINE GROSBEAK	23			+6	20	8	+6	2
WHITE-WINGED CROSSBILL								
COMMON REDPOLL	41	42			65	6		273
HOARY REDPOLL	27	2			4			
PINE SISKIN								
EVENING GROSBEAK	49				17	+2	+2	
HOUSE SPARROW		301			5	40	12	254
NO. INDIV. TABLES 3&4	4	4	0	0	3	0	0	0
NO. SPECIES COUNT DAY	17	14	8	3	21	12	10	16
NO. SPECIES COUNT PERIOD	17	14	8	8	21	16	12	16
NO. SPECIES TABLE 3&4	2	1	0	1	1	1	0	0
NO. INDIV COUNT DAY	286	1111	64	3	274	148	237	730

ble 2-6. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
= high count for a species seen during count period but not on count day)

26 Dec. 1989	47 MATADOR 31 Dec. 1989	48 MELVILLE 23 Dec. 1989	49 MOOSE JAW 26 Dec. 1989	50 NIPAWIN 30 Dec. 1989	51 PIAPOT 03 Jan. 1990	52 PIKE LAKE 02 Jan. 1990	53 PREECEVILLE 26 Dec. 1989	54 PRINCE ALBERT (1) 19 Dec. 1989	**LOCALITY & DATE** **SPECIES**
								1	MALLARD
									COMMON GOLDENEYE
								1	BALD EAGLE
1								1	NORTHERN GOSHAWK
	1				3				GOLDEN EAGLE
			+1						MERLIN
									PRAIRIE FALCON
5		12	35		10	7			GRAY PARTRIDGE
			7						RING-NECKED PHEASANT
		+2	1			2		5	RUFFED GROUSE
30	10	+30			48	123			SHARP-TAILED GROUSE
42		+2	353			3	15		ROCK DOVE
2	1	1	+1			3			GREAT HORNED OWL
	1		1						SNOWY OWL
	11								SHORT-EARED OWL
2		2	2	2		10	1	4	DOWNY WOODPECKER
4			1	2		15	2	2	HAIRY WOODPECKER
								2	PILEATED WOODPECKER
			1		5				HORNED LARK
									GRAY JAY
4				3		18		2	BLUE JAY
31	3	1	58	2	24	143		6	BLACK-BILLED MAGPIE
3		+3		23		19	1	20	COMMON RAVEN
118		20	3	18		106	3	8	BLACK-CAPPED CHICKADEE
				1					BOREAL CHICKADEE
			+1	1					RED-BREASTED NUTHATCH
			1	1		2	1	2	WHITE-BREASTED NUTHATCH
3			2			11			AMERICAN ROBIN
32			+10			1527		30	BOHEMIAN WAXWING
		+100							CEDAR WAXWING
	1					3			NORTHERN SHRIKE
			1			3			EUROPEAN STARLING
									AMERICAN TREE SPARROW
			1						DARK-EYED JUNCO
94	230	+20				41	3		SNOW BUNTING
									RUSTY BLACKBIRD
26		12	15	8		85		6	PINE GROSBEAK
				+5					WHITE-WINGED CROSSBILL
28			4	5		1534		15	COMMON REDPOLL
6		15				7		3	HOARY REDPOLL
						1			PINE SISKIN
3				31		32	11	40	EVENING GROSBEAK
40		20	687			225	9	8	HOUSE SPARROW
0	0	1	0	0	0	3	0	3	NO. INDIV. TABLES 3&4
18	8	9	17	12	5	25	9	19	NO. SPECIES COUNT DAY
18	8	15	23	13	5	25	9	19	NO. SPECIES COUNT PERIOD
0	0	1	2	0	0	2	0	1	NO. SPECIES TABLE 3&4
71	258	84	1173	97	90	2923	46	159	NO. INDIV COUNT DAY

Table 2-7. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = high count for a species seen during count period but not on count day)

SPECIES / **LOCALITY & DATE**	55 PRINCE ALBERT (2) 29 Dec. 1989	56 PRINCE ALBERT N.P. 16 Dec. 1989	57 RAYMORE 24 Dec. 1989	58 REGINA 26 Dec. 1989	59 ROCHE PERCEE 30 Dec. 1989	60 ROUND LAKE 02 Jan. 1990	61 SALTCOATS 24 Dec. 1989	62 SASKATOON 26 Dec. 1989	63 SCOTT
MALLARD				12		9		8	
COMMON GOLDENEYE								119	
BALD EAGLE			+1						
NORTHERN GOSHAWK		2	+1					1	
GOLDEN EAGLE									
MERLIN	2		1	3				9	
PRAIRIE FALCON									
GRAY PARTRIDGE	6		36	59		+6		28	
RING-NECKED PHEASANT				2	6				
RUFFED GROUSE		7	2	1		5	3		
SHARP-TAILED GROUSE		+4	17				+12	30	
ROCK DOVE	356		48	2077	5	4	3	1365	
GREAT HORNED OWL	+2		14	9		+1		1	
SNOWY OWL			+1	21					
SHORT-EARED OWL				1					
DOWNY WOODPECKER	1	3	6	6	2	7		11	
HAIRY WOODPECKER	2	5	8	2	1	6	2	10	
PILEATED WOODPECKER		+2							
HORNED LARK			+3						
GRAY JAY	3	12							
BLUE JAY	10		+1	1		5	1	36	
BLACK-BILLED MAGPIE	51	7	39	91	21	4	4	586	
COMMON RAVEN	205	13	+1			2	5	+4	
BLACK-CAPPED CHICKADEE	33	74	16	35		16	17	193	
BOREAL CHICKADEE		7			2				
RED-BREASTED NUTHATCH	2			4				7	
WHITE-BREASTED NUTHATCH	1			6		10		1	
AMERICAN ROBIN				14		1		3	
BOHEMIAN WAXWING	11091		116	114				1054	
CEDAR WAXWING				17				36	
NORTHERN SHRIKE			1	2				4	
EUROPEAN STARLING	50		6	2	4			13	
AMERICAN TREE SPARROW									
DARK-EYED JUNCO	2		1	2					
SNOW BUNTING	2		2130	601			50	50	
RUSTY BLACKBIRD			+1						
PINE GROSBEAK	67	+1	62	83	4	25	11	99	
WHITE-WINGED CROSSBILL		5		5				25	
COMMON REDPOLL	78	138	163	55	7	200	2	416	
HOARY REDPOLL	+5		7			25		1	
PINE SISKIN				5		+2		4	
EVENING GROSBEAK	201	+15	+2			50		2	
HOUSE SPARROW	333		390	1418	258	25	62	1315	
NO. INDIV. TABLES 3&4	40	10	2	254	0	1	2	11	
NO. SPECIES COUNT DAY	20	15	20	32	10	17	12	32	
NO. SPECIES COUNT PERIOD	22	19	31	34	10	20	13	35	
NO. SPECIES TABLE 3&4	1	3	4	8	0	1	1	6	
NO. INDIV COUNT DAY	12496	284	3065	4827	310	395	162	5462	2

ble 2-8. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
= high count for a species seen during count period but not on count day)

64 SKULL CREEK 26 Dec. 1989	65 SNOWDEN (1) 28 Dec. 1989	66 SNOWDEN (2) 31 Dec. 1989	67 SOMME 16 Dec. 1989	68 SPINNEY HILL 30 Dec. 1989	69 SPRING VALLEY 31 Dec. 1989	70 SPRUCE HOME 29 Dec. 1989	71 SQUAW RAPIDS 22 Dec. 1989	72 TISDALE 25 Dec. 1989	**LOCALITY & DATE** **SPECIES**
							6		MALLARD
							213		COMMON GOLDENEYE
2							7		BALD EAGLE
			1				4		NORTHERN GOSHAWK
+2			1	1	2				GOLDEN EAGLE
									MERLIN
+1									PRAIRIE FALCON
+16	11	43	12		155				GRAY PARTRIDGE
5									RING-NECKED PHEASANT
	4	1	3				9		RUFFED GROUSE
	3		23	+2	+40			3	SHARP-TAILED GROUSE
+30			3		7				ROCK DOVE
2			1		3				GREAT HORNED OWL
1	1		+1		1			1	SNOWY OWL
+2					+1				SHORT-EARED OWL
6	1	1	2		+2	1	8	3	DOWNY WOODPECKER
4	2		7		+1	2	12	3	HAIRY WOODPECKER
	+1		2			+1			PILEATED WOODPECKER
53					+2				HORNED LARK
	4	3	7				9		GRAY JAY
	8	7	10	6		3	4	3	BLUE JAY
34	3	19	29	20	7	1	13	5	BLACK-BILLED MAGPIE
	35	36	49	2		1	163	5	COMMON RAVEN
45	52	28	27	6		15	12	9	BLACK-CAPPED CHICKADEE
	2	1	1				2		BOREAL CHICKADEE
									RED-BREASTED NUTHATCH
	1		2				1		WHITE-BREASTED NUTHATCH
									AMERICAN ROBIN
3					25				BOHEMIAN WAXWING
									CEDAR WAXWING
+2					+1		1		NORTHERN SHRIKE
					38				EUROPEAN STARLING
3									AMERICAN TREE SPARROW
16			1						DARK-EYED JUNCO
126	200	72	31	1	+530		121	20	SNOW BUNTING
			20						RUSTY BLACKBIRD
18	+2		14	1		1	36	6	PINE GROSBEAK
		3	+7				17		WHITE-WINGED CROSSBILL
135		24	20	76	150	20	94		COMMON REDPOLL
			4	5			6		HOARY REDPOLL
									PINE SISKIN
8	150	162	51			20	4	8	EVENING GROSBEAK
128	55	47	112	41	300		3	16	HOUSE SPARROW
32	0	0	1	0	0	0	11	0	NO. INDIV. TABLES 3&4
18	16	14	26	10	10	9	27	12	NO. SPECIES COUNT DAY
26	18	14	28	11	19	10	27	12	NO. SPECIES COUNT PERIOD
3	0	0	1	0	2	0	5	0	NO. SPECIES TABLE 3&4
495	534	447	440	159	688	64	756	86	NO. INDIV COUNT DAY

Table 2-9. SPECIES RECORDED FROM MORE THAN FIVE LOCALITIES
(+ = high count for a species seen during count period but not on count day)

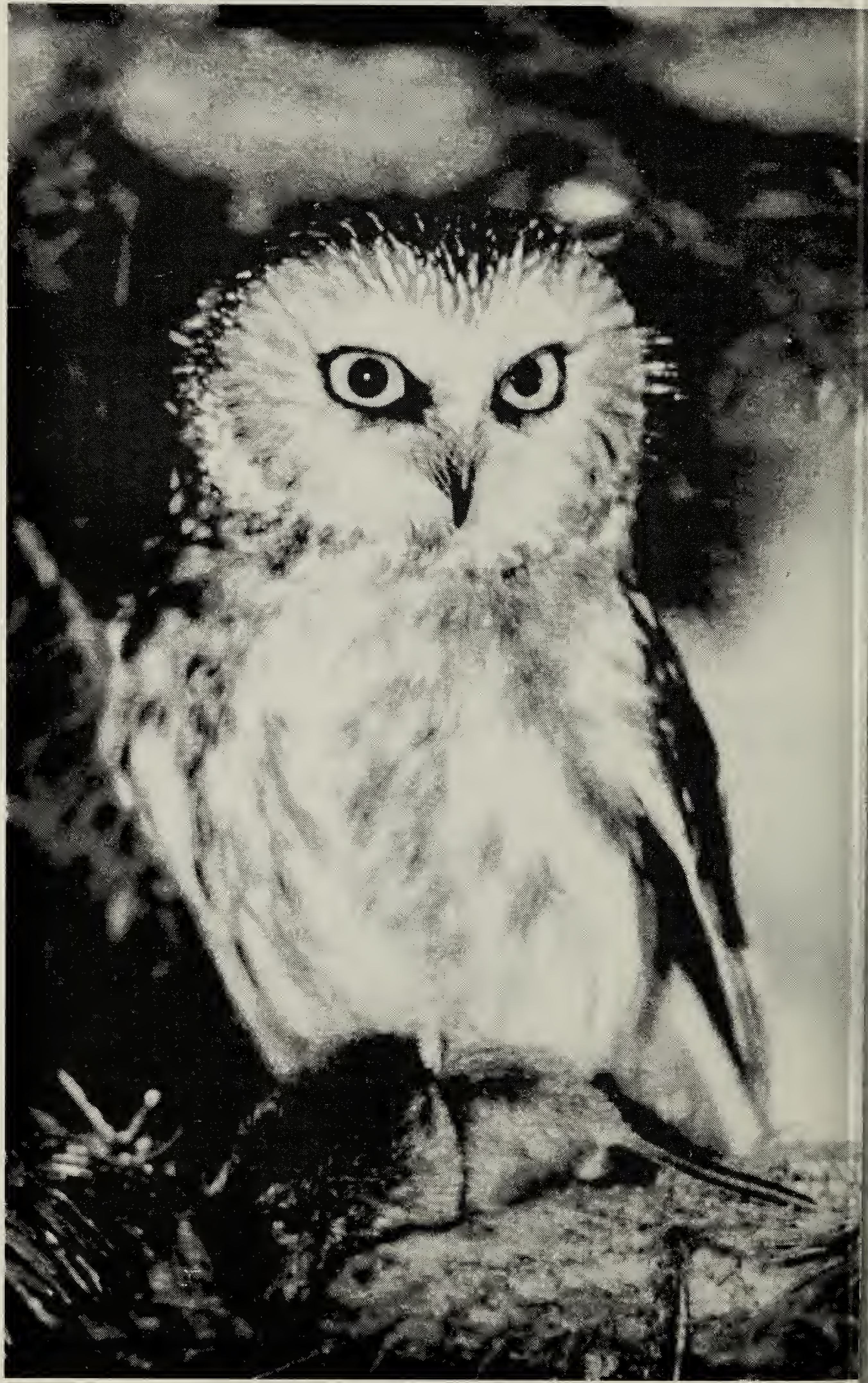
SPECIES / **LOCALITY & DATE**	73 WAUCHOPE 26 Dec. 1989	74 WEYBURN 16 Dec. 1989	75 WHITE BEAR 31 Dec. 1989	76 WHITE BEAR LAKE 21 Dec. 1989	77 WHITEBEECH 26 Dec. 1989	78 YORKTON 16 Dec. 1989	TOTAL INDIVIDUALS	NUMBER OF COUNTS ON COUNT DAY	NUMBER OF COUNTS
MALLARD						12	3524	13	
COMMON GOLDENEYE							382	6	
BALD EAGLE							23	8	
NORTHERN GOSHAWK		+1	+1				24	12	
GOLDEN EAGLE			5				44	17	
MERLIN	+1	1				1	19	8	
PRAIRIE FALCON			+1				4	4	
GRAY PARTRIDGE	55	28	30			28	1397	44	
RING-NECKED PHEASANT		2	9				247	15	
RUFFED GROUSE	3			1	1	3	108	31	
SHARP-TAILED GROUSE	31	7		1	+6	33	850	44	
ROCK DOVE	18	210	257	8		189	5419	43	
GREAT HORNED OWL	1	4	3	1		1	100	36	
SNOWY OWL		2	1				74	23	
SHORT-EARED OWL			1				18	4	
DOWNY WOODPECKER	2	3		2		1	191	57	
HAIRY WOODPECKER	1	3		3	1	2	217	55	
PILEATED WOODPECKER							17	6	
HORNED LARK		116	34				1876	17	
GRAY JAY							94	18	
BLUE JAY				14	5	2	323	43	
BLACK-BILLED MAGPIE	20	12	77	15		37	2743	75	
COMMON RAVEN				2	+5	14	1102	40	
BLACK-CAPPED CHICKADEE	15	4		39	4	16	1802	65	
BOREAL CHICKADEE							63	13	
RED-BREASTED NUTHATCH							27	9	
WHITE-BREASTED NUTHATCH		1		4		2	86	29	
AMERICAN ROBIN		+1					58	8	
BOHEMIAN WAXWING		5		2		1330	16832	31	
CEDAR WAXWING						16	152	6	
NORTHERN SHRIKE	2	1	+1				24	12	
EUROPEAN STARLING	1	+5	3				160	21	
AMERICAN TREE SPARROW							37	5	
DARK-EYED JUNCO		5					40	11	
SNOW BUNTING		444	+200	2		240	24951	50	
RUSTY BLACKBIRD			1				42	7	
PINE GROSBEAK	23	5		16		41	1295	56	
WHITE-WINGED CROSSBILL	2						57	6	
COMMON REDPOLL	283	78	24	160	8	17	6525	60	
HOARY REDPOLL	6			1			276	31	
PINE SISKIN		1		1		1	28	8	
EVENING GROSBEAK				91	60		1748	33	
HOUSE SPARROW	251	370	300	162	4	412	13256	67	
NO. INDIV. TABLES 3&4	3	3	1	1	0	0			
NO. SPECIES COUNT DAY	17	23	14	20	7	21			
NO. SPECIES COUNT PERIOD	18	26	18	20	9	21			
NO. SPECIES TABLE 3&4	1	2	1	1	0	0			
NO. INDIV COUNT DAY	717	1305	746	526	80	2809			

able 3. SPECIES SEEN IN FIVE OR FEWER LOCALITIES

OMMON LOON	Squaw Rapids, 1
ANADA GOOSE	Abernethy-Katepewa, 2; Dalmeny, +2; Fort Qu'appelle, 1; Gardiner Dam, 6; Prince Albert (1), 3; Regina, 238
ORTHERN PINTAIL	Abernethy-Katepwa, +1
ANVASBACK	Fort Quappelle, 1
NG-NECKED DUCK	Crooked Lake 1
SSER SCAUP	Squaw Rapids, 1
OMMON MERGANSER	Abernethy-Katepwa, 1; Gardiner Dam, 164; La Ronge, 3; Squaw Rapids, 6
UGH-LEGGED HAWK	Fort Walsh, 1; Gardiner Dam, 1; Govenlock, 1; Raymore, +1
REGRINE FALCON	White Bear Lake, 1
YRFALCON	La Ronge, 1; Skull Creek, +1; Spring Valley, +1
RUCE GROUSE	Carragana, +2; Livelong, 3
GE GROUSE	Govenlock, 7; Grasslands National Park, 1
ILD TURKEY	Fort Walsh, 7; Kamsack, 5
STERN SCREECH OWL	Kamsack, 1
ORTHERN HAWK OWL	Leask-Marcelin, +1
RRED OWL	Squaw Rapids, 1
REAT GRAY OWL	Candle Lake, 1
DREAL OWL	Raymore, +1
ORTHERN SAW-WHET OWL	Abernethy-Katepwa, +1; Carragana (1), +1; Maidstone, 1; Raymore, +1
IREE-TOED WOODPECKER	Fort Walsh, 1; Kelvington, 4; Prince Albert National Park, 2; Squaw Rapids, 2
ACK-BACKED WOODPECKER	Candle Lake, 2; Prince Albert National Park, 1
ORTHERN FLICKER	Pike Lake, 1; Saskatoon, 5; Weyburn, 1; Regina, +1
IERICAN CROW	Fort Walsh1; Melville, 1; Regina, 3; Saskatoon, 2
OWN CREEPER	Fort Qu'Appelle, 1; Fort Walsh, 1; Saskatoon, 1
DLDEN-CROWNED KINGLET	Fort Walsh, 7; Greenwater P.P., 1; Prince Albert National Park, 7; Raymore, 2
WNSEND'S SOLITAIRE	Regina, 1
HITE-THROATED SPARROW	Regina, 1; Saskatoon, +1; Somme-Weekes, 1
RRIS SPARROW	Fort Walsh, 1; Maidstone, 1; Moose Jaw, +1; Saskatoon, +1; Skull Creek, 1; White Bear, 1
PLAND LONGSPUR	Big Muddy Lake, 2; Bromhead, 1005; Duval, 30; Govenlock, 8; Spring Valley, +2; Weyburn, 2
D-WINGED BLACKBIRD	Fort Qu'Appelle, 1; Indian Head, 2; Wauchope, 3
EWER'S BLACKBIRD	Pike Lake, 2; Round Lake, 1
MMON GRACKLE	Carragana (1), +1; Moose Jaw, +6; Regina, +1
SY FINCH	Fort Walsh, 1; Skull Creek, 31
RPLE FINCH	Fort Qu'Appelle, +1; Saltcoats, 2
) CROSSBILL	Fort Walsh, 5; Livelong (2), +2; Saskatoon, 3

le 4. BIRDS NOT IDENTIFIED TO SPECIES

EO species	Fort Walsh, 1
GE OWL species	Bangor, 1
NGILLID species	Prince Albert (2), 40
RROW species	Kelvington, 1
NGSPUR species	Govenlock, 1
SSBILL species	Regina, 3
POLL species	Biggar, 14; Big Muddy Lake, 16; Bjorkdale, 2; Bromhead, 4; Fort Walsh, 153; Gardiner Dam, 12; Govenlock, 7; Last Mountain Lake, 4; Regina, 8; Scott, 27;



Northern Saw-whet Owl with House Mouse *Wayne L ch*

LD WIVES LAKE, SASKATCHEWAN IRD COLONY PERSISTS THROUGH ROUGHT

LE HJERTAAS, Saskatchewan Parks, Recreation & Culture, 3211 Albert Street,
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sle of Bays, Old Wives Lake, in south- stern Saskatchewan has one of the vince's larger bird colonies. This is- d is a major nesting area for White licans with 1000 nests in 1957, 746 in 68, 1420 in 1976, 3084 in 1978, 3075 1980, 2617 in 1982 and 2184 in 1985. uble-crested Cormorant also nest here h 350 nests in 1957, 88 in 1968, 319 1976, 658 in 1978, 693 in 1980, 147 1982 and 96 in 1985.[7][3][4] In addition, island is home to a Great Blue Heron ony which had only 3 nests in 1957,[3] in 1970,[6] but had 64 nests in 1976.[4] In 57, 2000 Ring-billed Gull pairs nested e along with 50 pairs of California lls and 1000 pairs of Common Terns.[3] abundance of gulls and terns has not n reported in more recent surveys.

Vater levels in Old Wives Lake have n declining for several years. In 1987 lake went completely dry during the mmer. In 1988, as there was almost no off in the spring, Old Wives Lake nained dry.

n 19 July 1988 Earl Wiltse and the ior flew over Isle of Bays to determine ether any colonial birds were nesting. observed both White Pelicans and at Blue Herons nesting but no gulls, s or cormorants.

pproximately 60 young White cans were on the island. They stayed very tight creche beside a tree clump reacted to our flights past them by ing in a tight group to the opposite of the tree clump. No adult pelicans observed, but as the young appeared too small to fly, adults must have been returning to feed them.

Production of 60 young pelicans is small for a colony which held 2000-3000 breeding pairs in recent years. Nonetheless, any level of production is surprising in light of the fact that the lake was dry for 2 years, as were many of the smaller wetlands in the Missouri Coteau.

There were seven active Great Blue Heron nests (one or more herons on the nest) in trees at the west side of the island's north point and four in willows on the east side of the point. The number of young present was not counted. By 19 July young herons should be large and ready to leave the nest. My assumption that each nest with a heron in it represents an active nest could be in error if some young had dispersed to adjacent nests.

Dunbar summarized reports of travel distances to foraging sites from White Pelican colonies as follows: Stum Lake, B.C. - 3-142 km; Great Salt Lake, Utah - 48-160 km; Birch Lake, Alberta - 30-69 km; Chase Lake, North Dakota 50 to 307 km, with 90% of foraging within 127 km of the colony.[2]

Great Blue Herons have been reported to fly an average of 3.7 km and a maximum of 20-24 km to feeding sites.[5][1]

Ile of Bays is 3.5 - 5 kms from the nearest points on the north, east and south sides of Old Wives Lake, and 22 kms from the mouth of the Wood River on the lake's west side. The nearest lakes likely to provide fishing opportunity are Last Mountain Lake, the south end of which is 100 km from Isle of Bays, Buffalo Pound Lake and Thompson Lake which are 55 km from the colony and Avonlea Reservoir 60 km away. These lakes are all within the reported feeding ranges for White Pelicans, but well beyond the 20-24 km maximum one way travel for Great Blue Herons. The most likely feeding area for the herons would be small ponds and marshes in the Missouri Coteau, with perhaps an average flight of 10-15 kilometres. While many of the smaller ponds in the Couteau were dry in 1988, I did not determine how many basins retained water.

Nesting on islands in dry lakes is unusual. Islands are preferred as nest sites because they offer protection from terrestrial predators. The bare salt flats of the dry lake bottom may still be a significant predator barrier. Whether the decline in pelican numbers is due to predation, lack of food, or whether the dry lake simply did not provide the proper stimulus for most former colony members to breed is unknown.

[1] DOWD, E. M. & L. D. FLAKE 1985. Foraging habitats and movements of nesting Great Blue Herons in a prairie ecosystem South Dakota. J. Field Orni ogy 56:379-87.

[2] DUNBAR, D.L. 1984. The bree ecology and management of w pelicans at Stum Lake, British Colum Fish and Wildlife Report No. R-6, B.C. istry of Environment, Surrey, B.C.

[3] LAHRMAN, FRED 1957. Birds of Isle of Bays, 1957. Blue Jay 15:106-1

[4] RONEY, KEITH 1978. Pelicans, morants, and Great Blue Heron in S atchewan in 1976. Blue Jay 36:28-35.

[5] THOMPSON, D. H. 1978. Fee areas of Great Blue Heron and Egrets ing within the floodplain of the Upper sissippi River. Proc. Colonial Wate Group 2:202-213 (cited in Dowd and F 1985).

[6] VERMEER, KEES and G. G. ANWEI 1970. Great Blue Heron colonies in S atchewan in 1970. Blue Jay 28:158-1

[7] WEINS, T. W. 1987. White Pelica Double-crested Cormorant nest su 1985. SPRC Wildlife Population Man ment Information Base Report #87-W 11.

Nesting Pelicans at Old Wives Lake *Keith Roney, Sask. Museum H.*

UFFED GROUSE: CRAZY-FLIGHT ONCLUSIONS

CTOR C. FRIESEN, P.O. Box 65, Rosthern, Saskatchewan. S0K 3R0

The author has previously published icles on the crazy-flight phenomenon the Ruffed Grouse.[2 3 4 5] They described grouse's propensity at times for wildly ing about, often into objects and killing lf. Various theories about the cause re discussed. Now an article by dgwood on the same phenomenon prompted further analysis of this puz-ng activity.[10]

he very diversity of explanations in the rature on the subject — some 16 in nber reviewed in these articles — ms to suggest that they may but point possible *contributing* factors of the ht. For example, the crazy flight cited Wedgwood all involved young birds he fall season. Savage correctly says "in all likelihood" fall dispersal of ng grouse is responsible for crazy nts.[8] That more crazy flight would ur in fall and to young birds is onable: there are more young birds (relative to old), they are inex-enced, and, in seeking home ter-ries, they may be in unfamiliar surroundings where fatal collisions could easily happen.

d Grouse   *Juhachi Asai*

That the fall dispersal in itself directly causes the crazy-flight phenomenon, however, does not have complete supporting evidence, as made clear in the previous articles. Mature grouse have killed themselves in wild flight in other seasons.[2 3]

Perhaps there is an *underlying* cause, a trait in the instinctive behaviour of Ruffed Grouse which, when coupled with other factors, leads to so-called "crazy flights." What is suggested is the bird's typical mode of take-off — a rocketing flight with speeds up to 80 km/h.[3]

Almost every study of this grouse makes reference to this unique take-off, and quoted here are references from studies not cited previously. Pough writes of the grouse "springing into the air ... and roaring off on an erratic course through the woods."[7] Blachan says that the bird "hurls itself from the ground," seemingly as if it were "shot from the mouth of a cannon."[1]

Probably the best description of the grouse's take-off is given by Forbush and deserves quoting in length:

"No sound of the forest is more startling than the sudden thunderous roar of beating pinions with which it rises, sometimes almost from underfoot, scattering the fallen leaves like a little whirlwind, tearing its way through rustling leaves and bending twigs, winning distance and concealment in one breathless instant. A stirring dash, a swirl of leaves and it is gone, leaving the slow blundering human biped startled and staring with open mouth and fast-beating heart. It is not necessary for this grouse to rise with such bluster for it can fly and alight as quietly as most birds, but the sudden whir speaks eloquently of fear and is the birds's method of escaping quickly, confounding its enemies, and sounding the alarm to its companions in danger."[6]

The Ruffed Grouse, with its short, curved wings, is capable of only limited manoeuverability during the time of its exceedingly fast take-off. In its natural surroundings, this limitation is not a real handicap, for it can dodge trunks and branches well enough to make good its escape. Still, the wings often clip twigs in the bird's swerving course through trees (the clicking sound is readily heard), and there have been instances of a bird being impaled on a dry branch.[2]

In winter the grouse makes additional use of its rocketing flight to "dive" into snowbanks for an overnight covert, where it will be insulated from the cold. Seton devotes four pages of a true account of a particular Ruffed Grouse in his classic *Wild animals I have known* to describe such an event.[9] Manoeuverability is not a concern here at all, and the action can stand the grouse in good stead.

Envision, then, the Ruffed Grouse in surroundings other than natural, in an environment with man-made structures — large buildings and plate-glass windows. The incidence of being unable to avoid them and thus crashing into them after a rocket-like take-off would be manifold. And this incidence would be markedly increased each fall with many young, inexperienced birds in territory unfamiliar to them.

Wedgwood notes that a stray cat stalking a covey of grouse initiated that crazy flight. It is just such coincident actions — in this instance fear of predator and a fast take-off — which led to the fatal crazy flight of three birds crashing into a w dow of a shed.

So it may be that the crazy-fli phenomenon can be generally counted for in part by one or more of many explanations given in the past: dispersal, migration instinct, populat pressure, diet, disease, predation, frig strange surroundings, sparse cover, gression, etc.[2 3] But these explanation n be secondary, needing always to be co bined with the primary reason — Ruffed Grouse's sudden, exploding ta off and its insufficient manoeuverabi to avoid large objects in an unnatu environment.

[1] BLANCHAN, N. 1917. Bir Doubleday, Doran, Garden City, N.Y. pp.

[2] FRIESEN, V.C. 1971. The crazy f t phenomenon of the Ruffed Grouse. *Jay* 29:121-124.

[3] FRIESEN, V.C. 1978. Further ob vations of the Ruffed Grouse's "cr flight." *Blue Jay* 36:192-199.

[4] FRIESEN, V.C. 1980. Crazy gr e comment. *Blue Jay* 38:135-136.

[5] FRIESEN, V.C. 1985. Banging h s and taking notes. *The Drummer* 11:14

[6] PEARSON, T.G. *et al* 1936. Bir America. Garden City Books, Garden N.Y. 3 vols. 272 pp., 271 pp., 289 pp.

[7] POUGH, R.H. 1951. Audubon w bird guide. Doubleday, Garden City, Y. 352 pp.

[8] SAVAGE, C. 1985. The wonde Canadian birds. Western Producer P Books, Saskatoon. 211 pp.

[9] THOMPSON, E.S. [E.T. SETON] 8. Wild animals I have known. Ch s Scribner's Sons, N.Y. 298 pp.

[10] WEDGWOOD, J.A. 1989. Two R d Grouse encounters. *Blue Jay* 47:102- 4.

URKEYS AT CLAIR, SASKATCHEWAN

urther to my article on turkey sightings Clair, Saskatchewan 29 December 88 (Vol. 47(2):117-119), I recently eived the following letter from Chris nstrong of Quill Lake:

> Ay June copy of the *Blue Jay* just arived. In it I saw your article "Turkeys t Clair, Saskatchewan." Those turkeys vere imported to the area by Jack vans. He got five or six hens from the outheast part of the province. Last ear Ed Kenneth of Parkman located a m for Jack. This last season there was ood success in nesting but I don't now how the survival rate was.
>
> Jack has also tried to establish pheasants, but our climate seems too harsh for them.
>
> Jack also has a herd of bison. I think he has 70-80 now.
>
> I don't know if this will be much help to you or not, but the turkeys are the wild variety.

...Chris answers questions posed in my article.. — *James H. Purdy*, Box 518, Frog Lake, Alberta. T0A 1M0

Turkey at nest

Wayne Lynch

WINDBREAKS FOR PLOVERS

JIM WEDGWOOD, 610 Leslie Avenue, Saskatoon, Saskatchewan. S7H 2Z2

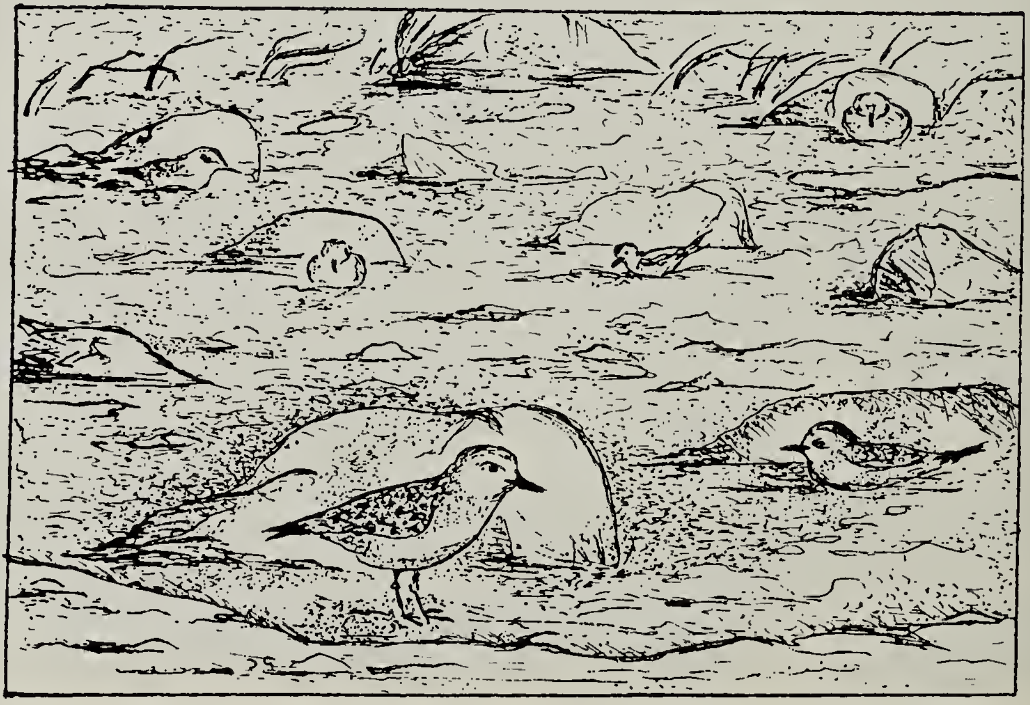
Radisson Lake was low in the fall of 1988, and a stony mud flat had become exposed on its west side. While walking towards this shore on 1 October, I saw in the distance a gray lump beside a stone, then more lumps, each beside a stone. Closer, the lumps became Black-bellied Plovers. The day having turned very windy, the birds were using the stones as windbreaks.

Nineteen plovers, each in the lee of a stone, were hunkered down out of the wind. They had selected stones 30 to 45 cm high, bypassing lower ones, but also avoiding higher boulders (predator fear?). The chosen stones were within 3 m of the water. All stones used had tops sloping up away from the wind and steep, downwind sides, that is, those making better windbreaks.

No plover was against or touching a stone. Instead, the bird was 15 to 30 cm away; and the higher the stone, the greater the distance. First, through choice of a stone with an optimal shape, then by positioning itself in relation to the stor height, the birds demonstrated a ke sensitivity to air currents, locating the selves where the wind was minimum. circulation pattern downwind from stone would be similar to that on the side of a snow fence (maximum sn depth, i.e. minimum air currents, occ not at the fence but rather a distance fr it, the space increasing with height of fence.)

The birds faced randomly, not nec sarily into the wind, an indication of effectiveness of the stones as wi spoilers. A further demonstration was birds' obvious reluctance to move w I neared them. Peter Matthiessen, ofthe great writers on shorebirds, ca the "the birds of the wind." [1] That day t displayed another sense of the wind.

[1] STOUT, G.D., PETER MATTHIESS A.V. CLEM and R.S. PALMER. 1 Shorebirds of North America. Viking Pr 270 pp.



Sketch by Pern Cordery

LACK-TAILED GULL IN SOUTHERN ANITOBA

HARD W. KNAPTON, 4327 Nigh Road, Ridgeway, Ontario. L0S 1N0

n 2 June 1987, from 1410 to 1430 h,
served a dark-mantled gull, which I
sequently concluded was a Black-
ed Gull (*Larus crassirostris*), on Lake
nnipegosis, Manitoba. This is ap-
ently the first Canadian record.

ke Winnipegosis is a large, shallow
ly of water noted for its numerous
nds and rock reefs, which support
eral large nesting colonies of water-
ls.[5] During the summer of 1987, I was
ard a fishing vessel which visited
ry colony of American White Pelicans
Double-crested Cormorants on Lake
nipegosis as part of a government
ly on colonial waterbirds in southern
itoba. During one of the survey trips
Black-tailed Gull was near Coleman
nd, Sagemace Bay, Lake Win-
gosis, (52°00′N, 99°50′W).

hen first seen, the bird was resting
California, Herring and Ring-billed
on an exposed reef at the north end
oleman Island. It was conspicuous
a considerable distance because its
mantle contrasted with its white
and body; I initially thought that it
an adult Lesser Black-backed Gull.
idea was dispelled as the boat passed
eef. The flock took flight, and started
llow the boat; the gull showed a
ngly obvious black tail band once it
irborne. Field notes were taken and
tch drawn during the 15 minutes that
ird followed the boat, after which the
flew back toward Coleman Island.
bird was watched through 10x40
ulars at a distance of 50 m while it
n land, and down to 10 m while in
. Weather conditions were excellent
sibility and the water was calm.

The gull was the size of the California Gulls, distinctly smaller than Herring and distinctly larger than Ring-billed Gulls, with which it was associating. The head and underparts were white; the mantle and upper wings were slate gray with a conspicuous white trailing edge to the secondaries; the primaries were black with no visible white sports at their tips; the underwing was noticeably gray apart from the black outer primaries; the rump and tail were white with a conspicuous solid black subterminal band and a thin white terminal band. The legs were yellowish, the bill was yellow with a prominent dark tip. The eye appeared dark; it is shown as yellow in adult Black-tailed Gull in Harrison.[4] When in flight, it was a more elegant, graceful gull than either Herring or California gulls; this impression is probably due to the proportionately longer wings of the Black-tailed Gull.[4] I did not initially identify the bird, and it was not until I had looked in several bird books and chatted with birders (especially Peter Grant) that I concluded that the bird was indeed a Black-tailed Gull. The individual most closely resembled the photographs of Black-tailed Gulls in *American Birds* (p. 1006), and in Grant (p. 263, with Herring Gull).[1] [3] Other birders were alerted of its presence, but subsequent searches of Sagemace Bay and Lake Winnipegosis failed to relocate the bird.

In North America, Black-tailed Gulls have been reported from the western Aleutians, from southern California and from Maryland.[2] [6] [1] The species nests along the coasts of the Sea of Japan, and disperses north to Sakhalin during the post-breeding season, hence the western Aleutian records are perhaps not too surprising. If the occasional Black-tailed Gull wanders to the west coast of North America, then the bird on Lake Winnipegosis may have joined California Gulls (which breed in western Manitoba and spend the winter on the west coast) and migrated with them to breeding grounds in the interior of the continent.

I thank Peter J. Grant and Ian Jones for helpful discussion on the identity of this bird. I also thank the Department of Natural Resources, Winnipeg, and especially Bill Koonz, for organizing the project.

[1] ARMISTEAD, H.T. 1984. Middle Atlantic Coast region. *American Birds* 38:1005-1008.

[2] FARRAND, J. Jr. (*Ed.*) 1983. Audubon Society master guide to bird Knopf, New York.

[3] GRANT, P.J. 1986. Gulls: a guid identification. 2nd. Ed. T & A D Poy Calton.

[4] HARRISON, P. 1983. Seabirds: identification guide. Houghton Mifflin, B ton.

[5] KNAPTON, R.W. 1987. Lake W nipegosis Colonial Waterbird Study. S cial Report, Dept. Nat. Res., Winni Manitoba. 21 pp.

[6] PETERSON, R.T. 1969. A field g e to western birds. Houghton Mifflin, Bos n.

Great Horned Owl female captured at nest Hardy tz

ANDING ADULT GREAT HORNED OWLS IN THE EDMONTON AREA

OLFGANG H. HOFFMANN, 133 Kaskitayo Court, Edmonton, Alberta. T6J 3T3

ince the spring of 1966, when I first otographed Great Horned Owls at ir nest, it became increasingly aprent to me that they preferred to return specific woodlots to nest year after r. It also appeared that the same inviduals came back time and time again. at evidence suggested that this was ppening? At first it was nothing more n a strong feeling. But before long, tle, yet recognizable, behavior traits ntified individuals. Sometimes colora- or unique markings strengthened my ws, particularly when close-up photos he birds were possible. At the same e, I also knew that feather color nged and faded progressively with r. So, something more conclusive was ded, i.e. banding, to show, beyond a bt, what was thought to be happen-

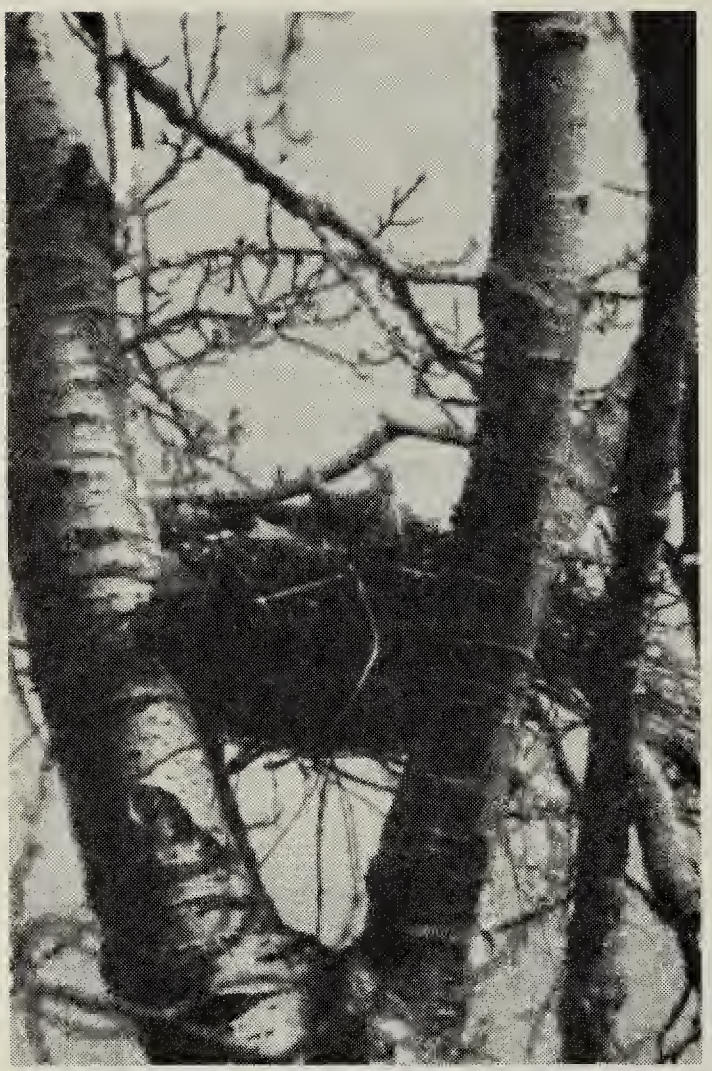
any thousands of Great Horned Owls e been banded by banders in Alberta, katchewan and elsewhere over the rs. Most, however, have been nests. Adult owls, being more difficult to , have only been banded incidentally e past. To my knowledge, there has been a long-term effort to band nestadults on territories.

ardy Pletz, who has banded Great ned Owls near Edmonton for almost ears, has also noticed that owls tend ccupy favorite woodlots year after . He strongly suspected the same lts to be involved. He thought that it ld be possible to capture the adult at their nest as they attacked, pararly the larger and more aggressive les. The first female owl he managed pture and band landed on the nest while he was peering over the opposite side. Using a modified salmon landing net, he was able to scoop her up during a split second distraction on her part. With practice, he soon became adept at scooping the incoming owls out of the air the instant before they struck him. Before long he was even catching the fleeter goshawks as they attempted to dislodge him from their nest tree.

The first evidence came from an area on the southeastern outskirts of Edmonton, Alberta (Colchester School Woodlot) occupied by a nesting female owl with a distinctively nasty disposition. Without hesitation, she would invariably strike anyone climbing the nest tree. "She has been there for at least nine years (prior to 1987), as far as I can remember," figured Hardy. It was just a feeling he had, because he really did not know for sure.

In 1987, as usual, she attacked. She was caught and banded along with her three nestlings. The male hooted and clacked his bill from a distance, but did not attack, just as he had always done (if indeed it was the same male).

The nest deteriorated through the summer, with the wear and tear it got during the nesting period helped by strong winds. That fall a wire basket was installed to replace the original nest. The new platform was comprised of green twigs laced through the mesh along with a matrix of interwoven dead boughs — a typical raptor nest, only better. In late winter a pair of Great Horned Owls appeared. The female used the man-made structure, laying three eggs.



Man-made, wire basket nest in use, spring 1988 *W.H. Hoffmann*

When the young were sufficiently developed, Hardy climbed the tree in order to band them. More importantly, he hoped to capture the hen to see if it was the same bird that had returned. As usual, she struck before he was even halfway up to the nest. She was caught, and lo and behold, she carried the band from the previous spring!

A lot of questions remain unanswered ... How many seasons had this bird been coming back to that "home" woodlot? How many more years would she continue to nest there? Was our observation an isolated incident, or do other horned owls behave the same way? Where would this owl go if this stand of mature black poplar was cut down like so many other patches of bush in the area? Was her mate the same one she was with in previous years? Would another pair take up residency in this woodlot if something happened to either one of this pair? Obviously all of these questions could ne be answered immediately. But by ba ing both territorial adults and recaptur them over a number of years, answer some of the questions would graduall forthcoming. Ideally, it would be usefu obtain recapture information from a ritorial adult that had been first bandec a nestling. Such a find would be luck best.

A second recapture last spring (19 helped confirm our belief that these o have a specific "home address" wh they choose to nest. In 1987 Hardy P banded an adult female Great Hor Owl at a nest southeast of Ft. S katchewan, Alberta. The following y the owls did not nest there; instead, it later learned that presumably the sa birds had used an old Red-tailed Ha nest in the adjoining section to southeast. In 1989 a pair was once ag back in the identical nest occupie 1987. Hardy managed to catch female on the fly as she attacked him. carried the 1987 band!

In 1987 the male had also attacked it had been too windy to risk a cap attempt. Again, in 1989, he was agg sive and this time he was caught banded. Pletz now has 20 adult G Horned Owls banded on territories; some he has productivity informat dating back a number of years. In 1 alone, he banded 10 adults. In most stances only the larger, more aggress female would attack, but twice he caught the male defending the nest si

Hardy now realizes that a bit more be learned about the biology of G Horned Owls from marked adults t from all the nestlings he has banded the last 15 years. Band returns from yo owls often result from the death of bird. A greater return from the ban effort is realized when a live bird ca identified year after year on the s territory.

ale Great Horned Owl caught for banding *Hardy Pletz*

OGGERHEAD SHRIKE TAKES OUSE SPARROW

RDON G. GRAHAM, Box 75, Group 7, R.R.# 1C, Winnipeg, Manitoba. R3C 2E4

approximately 10:00 a.m. on 15 Oc- r 1989, (my wife) Darlene, (son) Mar- l, and I were sitting at the table ally watching the birds at our backyard feeder 11 km north of Winnipeg and between PTH #9 and the Red River. Of the 18 or 20 birds present, half, or more, were House Sparrows, largely immatures;

about six were immature Harris' Sparrows; the rest were Dark-eyed Juncos. The bird feeder, about 15 m from the window, is near a treed shelterbelt of hybrid poplar, willow and spruce. Our attention was heightened when the birds suddenly flushed from the feeder into the shelter of a spruce which was about 3 m away. This type of behaviour generally indicated the arrival of a larger bird or intruder. By leaning forward I was able to see the new arrival in a poplar about 10 m west of the feeder. I recognised it as a shrike, but from the distance I was not sure of the species, so I stepped into the next room for my binoculars.

I returned to the window just in time to see the shrike pounce on an immature male House Sparrow that had flushed from under a spruce. When hit by the shrike, the sparrow was in flight about 0.5 m above the ground. The shrike struck, talons first, in the forward body of the sparrow. The attack carried both birds to the ground with the shrike on top. It maintained balance with several wing thrusts while simultaneously striking with its bill at the head or neck of the sparrow. As the fluttering of the sparrow decreased, the shrike struck twice again with its bill at the same area, with sufficient force that blood and feathers adhered to its bill.

When the sparrow ceased struggling, the shrike picked it up in its bill and attempted to fly off. However, the weight seemed to give it considerable difficulty as it barely made it off the ground and only went a distance of about 2 m. The shrike then renewed its grip and managed by half flying and half dragging, to get about another 3 m and up into a low fork in a nearby willow. The view,now partially obscured by a spruce, caused me to move to a window in an adjacent room. As I reached the window, the shrike, now carrying the sparrow in its talons, flew by and disappeared past the corner of the house. Even though the prey had been transferred to its talons the shrike was only flying about 1 m above the gro d and was beating its wings much n e rapidly than normal, obviously exer g considerable effort to carry the spar . By the time I was able to move to ano er window the bird could no longer be s n.

On checking the bird guide I identi d the shrike as a Loggerhead.[2] Primary d marks that I observed were the relati y uniform black stripe across the base o e bill and through the eye, the dark y crown and nape, the absence of ba g on the sides, and the dark upper d lower mandibles.

Bent states that the Loggerhead Shr 's warm season diet consists largely n- sect prey, while in winter the greater rt consists of mice and small birds, m ly sparrows and warblers.[1] Salt and lk make essentially the same observat s, noting that only when insect prey is n- available does the Loggerhead take ce or small birds.[3]

The overall observation period fro e time the shrike was first observed til seen departing with its prey was s- timated to be approximately 5 min es. This is the first sighting I have made a shrike in this particular area althoug ve have resided there for 15 years.

My sincere appreciation to Dr. N. Nero for his encouragement and edi ial comment.

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[1] BENT, A.C. 1965. Life histori of North American wagtails, shrikes, os and their allies. Dover Publ.. N.Y. 41 p.

[2] ROBBINS, C.S., B. BRUNN and S. ZIMM. 1983. Birds of North Am ca (Revised Edition) Western Publ. o. Racine. 360 pp.

[3] SALT, W.R. and A.L. WILK. 1966. he birds of Alberta (Second Edition). De o Industry & Dev't, Edmonton. 511 pp.

ELLOW-THROATED VIREO NEAR IRTLE, MANITOBA

LLIAM J. WALLEY, Dauphin Regional Comprehensive Secondary School, 330
untain Road, Dauphin, Manitoba. R7N 2V6

ı Manitoba few sight records of the
low-throated Vireo have been
orted from outside of its known breed-
range in the extreme southern portion
the province. The town of Birtle is
ited 150 km n of the U.S.A. border
about 30 km e of the Saskatchewan
ındary in western Manitoba. The town
tuated in the Birdtail Valley along the
tail Creek and is about 100 - 125 km
and n of the known breeding range of
vireo.[2] Birtle Park is 0.75 km w of
le and just below the Birtle dam. The
roximate 4 ha of the park consists of
tered Manitoba Maples (*Acer negun-*
and Green Ash (*Fraxinus pennsyl-*
ica) and two rows of young (4 - 6 m)
ıces (*Picea* sp.) growing in the lawn
. Camping sites and cabins are lo-
d on the s edge of the park at the base
ıe s slope of the valley. Mature Trem-
g Aspen (*Populus tremuloides*) as-
l this slope. The w edge of the park is
cnic area under a fairly dense stand of
ıre aspens and Balsam Poplar (*P. bal-*
ifera). Water spilling over the dam
sluice gates quietly flows along the n
of the park. A narrow strip of open
n and poplars grow between the n
of the creek and the golf course on
er ground. Willows (*Salix* sp.) grow
rofusion along both banks of the
. In summer, Birtle Park is home to
ıst 30 species of breeding birds.

Birtle Park in the later morning of 1
987, a vireo-sized and shaped bird
ıed facing away in a maple above
With 7x binoculars I noted two dis-
white wing bars, a sharp line of
ırcation between a rich yellow lower
t and white belly, and a vireo bill.
ird, which did not sing at that time, quickly flew off. The combination of field marks observed left little doubt that I had seen my first Yellow-throated Vireo. Sighting of the yellow upper breast, throat, eye ring and lores (spectacles) would be necessary to verify the species.

A bird, presumed to be the one in question, sang an unfamiliar song delivered from the canopy of the aspens on the s side of the park. The song, which was repeated, consisted of a raspy, loud "my dearie" followed by a pause, then a musical "come here" with a downward pitch. The song was also heard by Judith Walley and Isabella McLean. With each of my attempted approaches, the bird ceased to sing and flew off unobserved as witnessed by its singing from another area (the narrow strip of trees n of the creek).

In thin, misty rain of the early morning of 2 July, the bird began to sing at 0525 h from the dense upper stratum of a stand of poplars at the w edge of the park. This time its repeated song seemed to say "here I am ..... carry on ..... here I am ..... carry on," etc. Sometimes it ended its song with "free-burr" which was given twice at times. The song of the Yellow-throated Vireo has been described as a slow repetition of harsh two- or three-note phrases separated by long pauses: "de-ar-ie come-here" and is often concluded with a rising "three-eight."[4] The singing stopped, then started up again from n of the creek.

I listened to the vireo's song from behind a large, dense willow on the s side of the creek. As the song became louder, I realized the bird had flown closer to the creek and perhaps had perched in a dead shrub which would have no concealing leaves. Slowly I emerged from behind my "blind" and was elated to see the vireo singing from a dead willow directly across the creek 12-15 m away. For 8-10 seconds this magnificent bird was studied with its rich yellow breast, throat, eye-ring and lores clearly observed, as were its two distinct white wing bars, vireo bill and yellowish-olive back. It was one of the shyest birds I had ever encountered.

The habitat of this bird was consistent with other descriptions for its species which include: open stands of mature deciduous trees, often in residential areas; mature deciduous forest, often in river-bottom woodlands.[2 1 3] Although this record may be the most northwesterly for Manitoba, the Yellow-throated Vireo has been identified much farther north in Saskatchewan at Nipawin and Madge Lake as well as at Moose Mountain and in the Qu'Appelle Valley in that province.[2]

[1] CLEVELAND, N.J., C.W. CUTHBE G.D. GRIEF, G.E. HOLLAND, F HORCH, R.W. KNAPTON, R.F. KO N.F. MURDOCH, W.P. NEILY and WARD. 1980. Birder's guide southeastern Manitoba. Eco Series N Manitoba Naturalists Soc., Winnipeg. pp.

[2] GODFREY, W.E. 1986. The birds Canada. Revised ed. National Mus Natural Sci., Ottawa. 595 pp.

[3] KNAPTON, R.W. 1979. Birds of Gainsborough—Lyleton region (S katchewan and Manitoba). Spec. Publ. 10, Sask. Natural History Soc., Regina pp.

[4] SCOTT, S.L. (*Ed.*) 1983. Field guid the birds of North America. National G Soc., Washington, D.C. 464 pp.

WHITE-EYED VIREOS IN NORTH DAKOTA

Ron Martin of Route 1, Box 59-A, Sawyer, North Dakota, 58781 sent four records of White-eyed Vireos in that state to Frank Brazier, who observed one of these birds in Regina [see Blue Jay 47(4):216]. Frank has kindly passed these observations along to us, but was unable to determine where they had previously been published. The sightings were as follows:

15 May 1925 at Jamestown
23 May 1925 at Wahpeton
17 May 1931 at Valley City
19 May 1961 at Bismarck

At the latter site the song of the bird apparently recorded on 21 May by Randall. The observers were not give the other observations.

ROTHONOTARY WARBLER IN REGINA

RNE LAWRENCE, 405 - 2301 Lorne Street, Regina, Saskatchewan. S4P 2N1

honotary Warbler *Carol Bjorklund*

n 9 May 1988 at approximately 9:20
in the hedge south of the Wascana
lookout opposite Willow Island, I
through my binoculars the back view
warbler-size yellow bird with bluish-
wings blending in with the tail.
n the bird moved giving me a front
, I saw no markings but a bird with a
head, which was a deeper yellow
had a very dark eye. The morning
unny with good lighting for viewing
ird. My field guide, *Birds of North*
rica (Robbins, Bruun, Zim and
r), which I carried, confirmed to me
this was a male Prothonotary
ler, recorded as having a golden
and plain blue-gray wings. When
birders arrived later that morning to
e Prothonotary, they were unable to
him.

After hoping and praying that the Prothonotary Warbler would still be there so others could see him, I saw him the next day at 9:25 a.m. about 10 feet south from where he had been the previous day. By telephone I contacted Carol Bjorklund, who alerted other birders. When I returned to the lookout area, Carol had already photographed the bird. A number of us viewed him in the dull morning light, as he moved south in the upper part of the hedge, which had only begun to leaf, providing a good view from many angles. I could now see the white under his tail, which I had previously not noticed. There was some conversation among the birders, but this did not seem to disturb him. Once the Prothonotary even sang his repetitious song, a series of loud ringing "zweet" notes as noted on page 354 of *The National Geographic Society Field Guide to the Birds of North America* (Second Edition 1987, Scott).

Other birders who saw the Prothonotary on 10 May included Paule Hjertaas, Paule's father Dr. Jean Brochu of Quebec City, Karen and Trevor Herriot, Frank Brazier, Ron Myers and Tom Riffel. Trevor Herriot had views of the warbler from as close as 10 feet, near the shore among willows and caraganas, at 12:30 p.m. when it also sang, and at 6:00 p.m. At 8:45 p.m. he discovered it settled for the night with its bill tucked into its back feathers in a willow near the water just south of the lookout. Further out on the same branch overhanging the water, a Northern Waterthrush was also roosting. That evening others who saw him bedded for the night were Carol Bjorklund, Lauren Mang, Lucille Bradatsch, Phyllis Ilsley and Bill Dowhanuik. Observations that day ceased at 9:05 p.m.

There were sightings and sounds o
Prothonotary until 18 May in the s
general area. Trevor Herriot in his n
recorded that on 11 May at 7:15 a.m
saw the warbler and heard him sing
was also seen by Paul Chytyk early
morning. On 16 May at 7:00 a.m. He
heard the Prothonotary singing on a
overhanging branch, from Willow Isl
and located him with his telescope
was also seen and heard by Robert K
the same morning. Kreba also heard
sing the morning of 18 May but dic
see him.

Margaret Belcher's *Birds of Re*
Revised Edition, lists two previous un
firmed reports of the Prothono
Warbler: on 17 May 1969 by Dr.
Bedard and G. Bobbitt, and on 13
tember 1978 by R. Kreba. The sigh
from 9 May to the song on 18 May 1
substantiated by a photograph make
the first confirmed record of
Prothonotary Warbler for Regina an
Saskatchewan.

American Goldfinch nest *G.L. Ho*

OUSE FINCH AND AMERICAN OODCOCK AT SOMME, SKATCHEWAN

ALD F. HOOPER, Box 40, Somme, Saskatchewan. S0E 1N0

se Finch

hile visiting at David Black's place of Somme on 30 April 1987, we watching Purple Finches at his er which was a few feet away form icture window. David's son Wesley "That one bird is different," as he our attention to a specimen that was st identical to the female Purple hes except a little smaller and ut the paler stripe over the eye. It not a Pine Siskin as it had the stout o we assured Wesley that it must be iation in the Purple Finch.

next morning at home I saw the situation at my own feeder which is m from Black's. One female had a bill, with no stripe over they eye, vas smaller than the Purple Finches were with it. Upon checking my I realized that the birds that we had were female House Finches, which n the hypothetical list for Sas- ewan, so I kept my camera ready for l days, but the bird did not return. pecies has been previously reported skatchewan at Saskatoon, Fort Qu'- le and Regina.[1]

ican Woodcock

23 June 1989 I saw an American cock 6 km northeast of Somme. ext closest report is the detailed ption of one that was observed on y 1984 by Curtis and Marilyn Pol- ear Hazel Dell which is about 65 the south.[2]

morning of 23 June was overcast few spots of rain and I went down ab Creek to look for bird's nests. (I am not a nest robber I assure you, but some of my studies in nature have been to obtain nesting records of birds.) The area is open fields with aspens and willows along the banks and flood plain of the creed. At about 8 a.m. I came to an open area with scattered willows on the edge of a shallow pit where clay had been dug out for road building. All of a sudden a bird exploded from an open place between the willow, 2.5 m in front of me. As the bird raised straight upward for about 9 m to clear the brush, I could see immediately that it was a large-bodied snipe-type of bird with a brownish, barred back, rusty-orange rump, and a very long bill. The chunky body and broad rounded wings were partridge-like. As the bird flew there was a rustling of its wings, but no nasal sounding call like that of the Common Snipe and, when it got higher, I could clearly see that it was rusty-orange right through underneath from bill to tail. Immediately I thought to myself in utter surprise, "An American Woodcock!" It disappeared in a southward direction over the top of the nearby aspen bluff, probably to settle down again in the shrubbery near the creek.

The ground where I had flushed the bird was a very moist mossy area with a few sedges and dry leaves. Earthworms were present under the moss making this an ideal feeding place for a woodcock. Where the bird sat were several droppings showing that this nocturnal species had probably been there since daybreak.

When I returned to the area at 8 a.m. on 7 July and saw droppings here and there among the willows, I had the feeling that I would see the woodcock again. Sure enough! It suddenly flew up in front of me the same as before. I was sorry that I was unable to see the bird on the ground, or get a picture of it as it is also only listed as hypothetical for Saskatchewan.

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[1] HOUSTON, C.S., M.I. HOUSTON d J.B. GOLLOP 1981. Saskatche n bird species - hypothetical and reje d. *Blue Jay* 39(4):196-201.

[2] POLLOCK, CURTIS 1986. Ame n Woodcock seen in east-central skatchewan. *Blue Jay* 44():180-182.

American Woodcock on nest

Michael Mon

ASKATCHEWAN CHRISTMAS AMMAL COUNT—1989

npiled by WAYNE C. HARRIS, Box 414, Raymore, Saskatchewan. SOA 3JO

total of 68 counts were received, ctly the same as last year. A total of 35 cies were reported, one less than last r.

vo new species were reported. The was a Little Brown Bat at Fort Qu'elle. Ron Hooper reports that on 27 ember a single freshly dead specimen found near a church. What caused mainly insectivorous species to cease rnation and attempt to fly in the dead inter is a mystery, but a fatal activity he bat.

e second new species is one that will bably cause some controversy by g included, a Wild Horse on the Loon count. Frank Scott and Penny Davis rted this individual from the forested n to the south of Loon Lake where ral groups of feral horses have existed number of years. We do include the duced Norway Rat and House se but they are considered to be a ly naturalized part of our mam- n fauna, and I feel that the fact that erd of horses has persisted for more 20 years and reproduces in the wild fies them for the inclusion in the t. Although I would have to give deration to feral cats after having this decision on the horses, maybe ot such a bad idea to have a count number of feral cats which exist at rbage dumps for the winter, feeding e feral rats, feral House Mice, feral ngs and feral House Sparrows!

most frequently recorded species , as usual, White-tailed Deer, te, Snowshoe Hare and White- Jack Rabbit. Snowshoe Hare num- lo appear to be up slightly, possibly indicating that this species is approaching or at the crest of its population and coinciding with its traditional 10 year population cycle.

The cold weather just before Christmas was probably the cause of some species not being reported, such as the Richardson's Ground Squirrel and Racoon. The Lynx was unreported but indications from government sources are that the population may finally be recovering from dangerously low populations of the past few years so possibly in the next few years we can expect to have some records on the counts.

For weather, coverage and participants please refer to the Christmas Bird Counts found elsewhere in this issue. Symbols found in the tables are as follows:

*	identified by tracks with estimated numbers in parentheses
+	seen during count period but not on count day
L	active lodges or huts seen with numbers in parentheses
N	nests found with numbers in parentheses
D	fresh diggings seen
d	freshly dead animals found
S	odour detected
H	heard with numbers in parentheses

Table 1-1. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

SPECIES / **LOCALITY & DATE**	1.ABERNETHY-KATEPWA 18 Dec. 1989	2.ARCHERWILL 01 Jan. 1990	3.BANGOR 01 Jan. 1990	4.BETHUNE 29 Dec. 1989	5.BIGGAR 28 Dec. 1989	6.BIG MUDDY LAKE 29 Dec. 1989	7.BIG QUILL LAKE 20 Dec. 1989	8.BIRCH HILLS 30 Dec. 1989	11.BROMHEAD 03 Jan. 1990
MASKED SHREW									
SHREW SPECIES						*(1)			
LITTLE BROWN BAT									
NUTTALL'S COTTONTAIL						1			
SNOWSHOE HARE		2	2		*(2)		*	*(38)	
WHITE-TAILED JACK RABBIT				1	d(1)	*(1)	*	*(1)	*(12)
FRANKLIN'S GR. SQUIRREL									
GREY SQUIRREL									
FOX SQUIRREL									
RED SQUIRREL	3	6	+1					3	
NORTHERN FLYING SQUIRREL									
BEAVER			*(1)						
DEER MOUSE									
GAPPER'S RED-BACKED VOLE									
MUSKRAT									
MEADOW VOLE									
VOLE SPECIES						*(14)			*(21)
MOUSE SPECIES				1	*(5)	*(2)		*(5)	2
NORWAY RAT									
HOUSE MOUSE									
PORCUPINE			1		d(1)		2	*(1)	
COYOTE	1		+3	+1	4	6	*(2)	1	*(3)
WOLF									
RED FOX	2					*(3)		*(3)	*(6)
FISHER									
ERMINE								*(3)	
LONG-TAILED WEASEL								*(1)	
LEAST WEASEL						*(1)			
WEASEL SPECIES					*(1)		*(1)		*(3)
MINK								*(1)	
BADGER									
STRIPED SKUNK									S(1)
WILD HORSE									
MULE DEER				+8		10			
WHITE-TAILED DEER	2		7	+8	*(15)	7	2		42
DEER SPECIES									
MOOSE									
ELK									
PRONGHORN						60			
TOTAL SPECIES	4	2	6	5	7	11	6	10	8

le 1-2. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

15.CROOKED LAKE 25 Dec. 1989	19.DUVAL 28 Dec. 1989	20.ENDEAVOUR 31 Dec. 1989	21.FORT QU'APPELLE 16 Dec. 1989	22.FORT WALSH 16 Dec. 1989	23.GARDINER DAM 18 Dec. 1989	24.GLAMIS 26 Dec. 1989	25.GOOD SPIRIT L. 30 Dec. 1989	26.GOVENLOCK 17 Dec. 1989	**LOCALITY & DATE** **SPECIES**
									MASKED SHREW
							*(1)		SHREW SPECIES
			+1						LITTLE BROWN BAT
				*(1)	5	*		4	NUTTALL'S COTTONTAIL
*	*(2)	2	+1		1		*(33)		SNOWSHOE HARE
			+2	1	*(25)	*	*(10)	2	WHITE-TAILED JACK RABBIT
									FRANKLIN'S GR. SQUIRREL
		1							GREY SQUIRREL
									FOX SQUIRREL
1		2	2	11			2		RED SQUIRREL
							2		NORTHERN FLYING SQUIRREL
							L(1)		BEAVER
			+				1		DEER MOUSE
							1		GAPPER'S RED-BACKED VOLE
			+1				L(1)		MUSKRAT
									MEADOW VOLE
									VOLE SPECIES
	*(19)			*(1)	*(5)				MOUSE SPECIES
									NORWAY RAT
			+1						HOUSE MOUSE
				2		*	*(2)		PORCUPINE
	*(4)	*(1)	+1	5	*(2)		1	2	COYOTE
									WOLF
	*(1)		+1	*(1)	1	*		1	RED FOX
									FISHER
							*(1)		ERMINE
	*(3)								LONG-TAILED WEASEL
		*(1)							LEAST WEASEL
	*(1)			*(2)				*	WEASEL SPECIES
			1						MINK
								D(3)	BADGER
	S(1)								STRIPED SKUNK
									WILD HORSE
				50	33			42	MULE DEER
	*(3)	2	5	64	15		*(42)	4	WHITE-TAILED DEER
								7	DEER SPECIES
		*(1)							MOOSE
									ELK
				39				110	PRONGHORN
2	7	7	11	11	8	4	13	9	TOTAL SPECIES

Table 1-3. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCALITY & DATE SPECIES	27.GRAND CENTRE 26 Dec. 1989	28.GRASSLAND N.P. 28 Dec. 1989	30.HUMBOLDT 26 Dec. 1989	31.INDIAN HEAD 28 Dec. 1989	32.KAMSACK 19 Dec. 1989	33.KELVINGTON 27 Dec. 1989	34.KENASTON 25 Dec. 1989	35.KILWINNING 29 Dec. 1989	36.KUTAWAGAN LAKE 26 Dec. 1989
MASKED SHREW									
SHREW SPECIES						*(1)			
LITTLE BROWN BAT									
NUTTALL'S COTTONTAIL		3							
SNOWSHOE HARE			2	1	13	*(26)	*		*
WHITE-TAILED JACK RABBIT			1	6		2	*	*	3
FRANKLIN'S GR. SQUIRREL									
GREY SQUIRREL					2				
FOX SQUIRREL									
RED SQUIRREL	9			15	2	3		3	
NORTHERN FLYING SQUIRREL					1				
BEAVER									
DEER MOUSE									
GAPPER'S RED-BACKED VOLE									
MUSKRAT	1								
MEADOW VOLE									
VOLE SPECIES									
MOUSE SPECIES						*(5)			*
NORWAY RAT									
HOUSE MOUSE									
PORCUPINE		1	*(1)			*(1)	+3		2
COYOTE			1	8	2	2	+1		*
WOLF									
RED FOX			1	3		*(6)	+1	1	*
FISHER									
ERMINE									
LONG-TAILED WEASEL						3	*		
LEAST WEASEL									
WEASEL SPECIES									*
MINK									
BADGER									
STRIPED SKUNK									
WILD HORSE									
MULE DEER		14							
WHITE-TAILED DEER	*(3)	13	*(12)	6	14	26		*	3
DEER SPECIES		5							
MOOSE					3				
ELK									
PRONGHORN		177							
TOTAL SPECIES	3	5	6	6	7	10	6	4	8

le 1-4. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

39.LEADER 24 Dec. 1989	40.LEASK 03 Jan. 1990	41.LIVELONG (1) 02 Jan. 1990	43.LOON LAKE 01 Jan. 1990	44.LUSELAND 26 Dec. 1989	45.MAIDSTONE 02 Jan. 1990	46.MARSDEN 26 Dec. 1989	48.MELVILLE 23 Dec. 1989	49.MOOSE JAW 26 Dec. 1989	**LOCALITY & DATE** **SPECIES**
									MASKED SHREW
									SHREW SPECIES
									LITTLE BROWN BAT
1									NUTTALL'S COTTONTAIL
	1			1	3				SNOWSHOE HARE
1	1	1				1		*(4)	WHITE-TAILED JACK RABBIT
							+1		FRANKLIN'S GR. SQUIRREL
									GREY SQUIRREL
									FOX SQUIRREL
	+1	10			*				RED SQUIRREL
									NORTHERN FLYING SQUIRREL
1								*(2)	BEAVER
					1	+4			DEER MOUSE
									GAPPER'S RED-BACKED VOLE
									MUSKRAT
									MEADOW VOLE
									VOLE SPECIES
	+1							*(11)	MOUSE SPECIES
									NORWAY RAT
									HOUSE MOUSE
1	+1								PORCUPINE
4	+1		1		h(2)		2	*(6)	COYOTE
									WOLF
	+1			+1		1		*(5)	RED FOX
									FISHER
					1				ERMINE
							1		LONG-TAILED WEASEL
								*(2)	LEAST WEASEL
				+1					WEASEL SPECIES
		2						*(1)	MINK
								D(2)	BADGER
									STRIPED SKUNK
			1						WILD HORSE
52			26			+11			MULE DEER
65	5	20	9	+6	4		2		WHITE-TAILED DEER
									DEER SPECIES
			11						MOOSE
									ELK
				+31					PRONGHORN
7	8	4	5	5	6	4	4	8	TOTAL SPECIES

Table 1-5. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

SPECIES / **LOCALITY & DATE**	50.NIPAWIN 30 Dec. 1989	51.PIAPOT 03 Jan. 1990	52.PIKE LAKE 02 Jan. 1990	53.PREECEVILLE 26 Dec. 1989	54.PRINCE ALBERT (1) 19 Dec. 1989	55.PRINCE ALBERT (2) 29 Dec. 1989	56.PRINCE ALBERT N.P. 16 Dec. 1989	57.RAYMORE 24 Dec. 1989	58.REGINA 26 Dec. 1989
MASKED SHREW								1	
SHREW SPECIES							+1		
LITTLE BROWN BAT									
NUTTALL'S COTTONTAIL									
SNOWSHOE HARE			*(40)			10	14	7	*(6)
WHITE-TAILED JACK RABBIT								1	1
FRANKLIN'S GR. SQUIRREL									
GREY SQUIRREL									
FOX SQUIRREL									
RED SQUIRREL			2		1	7	6		6
NORTHERN FLYING SQUIRREL							1		
BEAVER						L(1)			
DEER MOUSE					1			2	
GAPPER'S RED-BACKED VOLE								7	
MUSKRAT									
MEADOW VOLE								1	
VOLE SPECIES							*(22)		
MOUSE SPECIES						2			*(10)
NORWAY RAT									
HOUSE MOUSE									
PORCUPINE			*(2)					2	d(1)
COYOTE		5	5			2		7	*(2)
WOLF							14		
RED FOX			1			1	*(4)	1	1
FISHER							1		
ERMINE								1	
LONG-TAILED WEASEL									
LEAST WEASEL									
WEASEL SPECIES			1			1			*(1)
MINK						1			
BADGER									
STRIPED SKUNK									
WILD HORSE									
MULE DEER		94							
WHITE-TAILED DEER	3	36	2	9		2	5	8	5
DEER SPECIES			*(9)				*(19)		
MOOSE	6								
ELK							42		
PRONGHORN		106							
TOTAL SPECIES	2	4	7	1	2	10	10	11	9

le 1-6. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

61.SALTCOATS 24 Dec. 1989	62.SASKATOON 26 Dec. 1989	63.SCOTT 31 Dec. 1989	64.SKULL CREEK 26 Dec. 1989	65.SNOWDEN (1) 28 Dec. 1989	66.SNOWDEN (2) 31 Dec. 1989	68.SPINNEY HILL 30 Dec. 1989	69.SPRING VALLEY 31 Dec. 1989	70.SPRUCE HOME 29 Dec. 1989	**LOCALITY & DATE** **SPECIES**
							+1		MASKED SHREW
									SHREW SPECIES
									LITTLE BROWN BAT
			2						NUTTALL'S COTTONTAIL
*	3	*(2)		3	1				SNOWSHOE HARE
*(2)		*(20)	2			*	5	3	WHITE-TAILED JACK RABBIT
									FRANKLIN'S GR. SQUIRREL
									GREY SQUIRREL
									FOX SQUIRREL
1	1		1	6	5	2			RED SQUIRREL
									NORTHERN FLYING SQUIRREL
									BEAVER
									DEER MOUSE
									GAPPER'S RED-BACKED VOLE
									MUSKRAT
									MEADOW VOLE
							+1		VOLE SPECIES
*		*(3)			*(9)		*		MOUSE SPECIES
					*(2)		1		NORWAY RAT
							*		HOUSE MOUSE
							+1		PORCUPINE
	2	1	3		*(4)		3	+1	COYOTE
									WOLF
	1		1	*(1)			1		RED FOX
									FISHER
									ERMINE
1	2						1		LONG-TAILED WEASEL
						1	+2		LEAST WEASEL
				*(2)	*(1)				WEASEL SPECIES
	+1								MINK
			1				+2		BADGER
*(2)	S(1)								STRIPED SKUNK
									WILD HORSE
			10				1		MULE DEER
4	2	2	20	+3	*(3)		+3	+3	WHITE-TAILED DEER
									DEER SPECIES
				+2	1				MOOSE
					*(3)				ELK
		16	131						PRONGHORN
7	8	6	9	6	9	4	12	3	TOTAL SPECIES

Table 1-7. SASKATCHEWAN CHRISTMAS MAMMAL COUNTS

LOCALITY & DATE SPECIES	71.SQUAW RAPIDS 22 Dec. 1989	72.TISDALE 25 Dec. 1989	73.WAUCHOPE 26 Dec. 1989	74.WEYBURN 16 Dec. 1989	75.WHITE BEAR 31 Dec. 1989	76.WHITE BEAR LAKE 21 Dec. 1989	77.WHITEBEECH 26 Dec. 1989	78.YORKTON 16 Dec. 1989
MASKED SHREW				*(2)				
SHREW SPECIES				*(2)			*(1)	
LITTLE BROWN BAT								
NUTTALL'S COTTONTAIL					1			
SNOWSHOE HARE	*	*	*(1)	*(3)		3	*(20)	1
WHITE-TAILED JACK RABBIT	*				+1	*		1
FRANKLIN'S GR. SQUIRREL								
GREY SQUIRREL								
FOX SQUIRREL			1					
RED SQUIRREL	37					*(1)		1
NORTHERN FLYING SQUIRREL								
BEAVER							L(1)	
DEER MOUSE			*(5)					1
GAPPER'S RED-BACKED VOLE								
MUSKRAT								
MEADOW VOLE					1			
VOLE SPECIES			1					
MOUSE SPECIES	*			*(1)			*(2)	
NORWAY RAT			*(1)					
HOUSE MOUSE								
PORCUPINE	1							
COYOTE	*		*(3)	1	+1			1
WOLF	*							
RED FOX			1	1				1
FISHER								
ERMINE								
LONG-TAILED WEASEL							*(1)	
LEAST WEASEL								
WEASEL SPECIES	*		*(2)			*(2)	*(1)	
MINK	*			+1				
BADGER								
STRIPED SKUNK								
WILD HORSE								
MULE DEER					208			
WHITE-TAILED DEER	3	3	*(10)	*(8)	2	2	*(2)	2
DEER SPECIES								
MOOSE	2							
ELK	4							
PRONGHORN								
TOTAL SPECIES	12	2	9	7	6	5	7	6

upine Juhachi Asai

URTH RED BAT FOUND IN BERTA

THEW B. SAUNDERS,* Department of Biological Sciences (Behavioural Ecology
p), University of Calgary, Calgary, Alberta. T2N 1N4

Red Bat is widely distributed in
tchewan and provinces east. Their
extends southward through the
d States, and into Argentina and
in South America.[1][2] However, only
ed observations of this species have been reported from Alberta and British Columbia.[1][3] Hugh Smith, curator of mammalogyat the Provincial Museum of Alberta, reported that four Red Bat specimens had been collected in Alberta by 1982.[4] In fact only three individuals

were on record by this time (H.C. Smith, pers. comm.). Because so few Red Bats have been seen west of Saskatchewan, all findings should be reported in order to better understand the distribution range of this species. Here is a report of the fourth record of a Red Bat found in Alberta, a summary of information collected on previous specimens from Alberta (Table 1), and a brief description of some aspects of the biology of this species.

Because they roost almost exclusively in trees, Red Bats are generally found near forests, or shade trees.[1] [2] The Red Bat is a strong-flying, migratory species, and consequently its breeding range is difficult to delineate.[1] [2] Segregation of the migration times between sexes has been noted, and may suggest different summer and winter ranges between males and females.[3] [5]

The remains of an adult male Red Bat were found in Writing-On-Stone Provincial Park near Milk River, Alberta (49° 05'N, 111° 37'W) on 23 August 1987. This find constitutes the fourth specimen recorded in this province. I had been mist-netting for bats in a variety of habitats in and near the park between 4 May and 20 August, 1987. Although I captured a total of 317 bats of six different species during this time, no Red Bats were caught. Trees are relativley sparse in this region of Alberta. However, isolated areas where trees are found, such as in the park and along the Milk River Valley, may serve as stop-over points for bats migrating south.

The body of the bat had been partly consumed, perhaps by a raptor (see 1,2), but the distinct pelage permitted identification of sex and species. Males are generally yellowish-red or orange in colour, and are usually more brightly coloured than females.[1] The age of the bat (adult versus juvenile) was distinguished by examining its "finger" joints for ossification. Juvenile bats have unossified epiphyses at the metacarpal-phalar al joints, unlike the specimen collecte

The specimen is now in the Museu of Zoology at the University of Cal ry [catalogue no. UCMZ(M) 1987.18].

Many thanks to S. Burton, R. Catte n, and S. Twelker for their sharp eyes. C. Smith (Provincial Museum of A r-ta),W.E Roberts (University of Al ta Museum of Zoology), and M.J. Pybu Al-berta Fish and Wildlife) provided u-able information regarding Red Ba in Alberta. Thanks to R.M.R. Barclay ar an anonymous reviewer for their critic ns of the manuscript. Operating grants m the Natural Sciences and Engineerin e-search Council to R.M.R. Barclay fu ed my research.

[1] VAN ZYLL DE JONG, C.G. 1 5. Handbook of Canadian Mammals: ts. National Museums of Canada. 212 p

[2] SHUMP, K.A. and A.U. SHUMP. 2 *Lasiurus borealis*. Mammalian Specie lo 183:1-6.

[3] BARBOUR, R.W. and W.H. D S. 1969. Bats of America. Lexington: he University Press of Kentucky. 286 pp

[4] SMITH, H.C. 1982. A key to Al ta bats. *Alta. Nat.* 12:115-121.

[5] BARCLAY, R.M.R. 1984. Obs a tions on the migration, ecology and f g ing behaviour of bats at Delta M sh Manitoba. *Can. Field Nat.* 98:331-33

[6] ANTHONY, E.L.P. 1988. Age d er mination in bats. *In* Ecological an e havioral methods for the study of b ts *Edited by* T.H. KUNZ. Smithsonian In tu tion Press, Washington. pp. 47-58.

[7] RACEY, P.A. 1974. Aging n reproductive status of pipistrelle ts *Pipistrellus pipistrellus*. *J. Zool.*, 173:264-271.

NIOR NATURALISTS

's April already, they ought to be ," Phillipa Fox sounded worried. She trotting across a big bare pasture. k Magpie was flying above her head.

o you see them Mark?" she asked ously looking up.

ho? Do I see who?" Mark asked.

ou know, Rusty and his wife. They're iginous Hawks, big pretty hawks like Golden Eagles," explained Phillipa. re's not many Ferruginous Hawks nd. They need lots of wide open , and people haven't left that much e, but you remember Rusty don't He and his wife have been back in asture every year for ages."

f course I remember Rusty. What do hink I am, anyway, a scatter brain?" demanded.

ell if you're not a scatter brain, how you forgot we're looking for them?" pa asked.

rk didn't answer, he just pretended been looking all along, and flew r in tight circles to prove it. Phillipa's drew circles in the air as she tried to him.

ope, nope, I can't see them there. re not there, not anywhere there" he and added, sounding surprised, "I ven see where their nest is, and it mean it isn't even there. Even the t isn't there either. It's there, but it isn't there, you know, I mean it's , not up, and they're not there here or here even."

Phillipa shook herself all over hard, "Whew Mark, you fly in circles 'til I'm dizzy, but your words are even worse. I'm going to see for myself."

She laid back her ears, and with her bushy tail straight behind her, she galloped across the short grass.

Mark beat her to the spot, and perched there yelling. "See, I told you."

By the broken down buildings of an old homestead, the gnarled grey trunk and tangled branches of a big tree lay on the ground. Phillipa sniffed at the heap of dust and dry sticks that was all that was left of Rusty's nest from the years before. She looked sad.

"Those cows rubbed it down; they like a good rubdown. It's not their fault if they rubbed it right down," Mark babbled.

Mark was right. Cattle had used the tree to rub up against, and spent so much time there that their hard hooves had finally dug a trench around it, and they'd rubbed the tree right over.

"No wonder Rusty's not here," Phillipa said. "He's got no where left to nest. There isn't a single other tree here."

"Were y'all lookin' for me?" said a harsh voice right behind them. Both animals spun round to see a huge hawk perched on a corner of the tumbledown barn.

"Rusty! You're back! But where's your nest?" Phillipa asked.

"I guess I don't mind lettin' y'all know," Rusty said. Spending winters in the southwestern U.S.A. had given him a bit of a drawl. "Emma and me was mighty startled at findin' our favorite nestin' tree down, but I know my great grand-pappy used to nest on cliffs, or the sides of steep coulees. Emma and I thought maybe we could find somethin' like that."

His huge wings shoved him up into the air, and he yelled, "Kree-a, kree-a, y'all come and see!"

After a mile of fast trotting Phillipa finally got to where she'd seen Rusty and Mark come down.

"Hey, this is no coulee or cliff!" she protested.

Rusty was perched part way up what looked like a telephone pole, on a big shelf. His wife Emma was there, too. She was a lot darker than Rusty, almost black.

"Ha ha haha!" yelled Mark from the top of the pole. "They fooled you, ha ha hahaha! Phillipa the fooled fox."

"I guess you did," Phillipa agreed.

"This ain't a cliff or a tree, but we was mighty glad to find it," Rusty drawled.

"That's right " Emma said. "There wasn't any coulees to speak of in this pasture at all, and me and Rusty didn't have in mind to move. This pasture's been a fine place to raise young'uns. They's lots of wide open space, and lots of gophers."

"Speakin' of gophers," interrupted Rusty, "I'd better get to work and russell us up some dinner. Bye Phillipa, bye Mark, it was nice seein' y'all agin."

"Isn't he magnificent?" asked Phillipa looking up as the huge hawk rose in lazy circles.

"Magnificent, me?" said Mark, "Magnificent magpie, Mark the magnificent magpie. That's me alright."

"Silly, I wasn't talking about you,
Phillipa, and both she and Emma la
at him. Mark flew off squawkin
indignation.

"It's great to have you and Rusty
Emma," said Phillipa, "but I sure w
where this nest pole thing came
Maybe we'll never know."

Junior Naturalists, try a little det
work and look in the December
Blue Jay for a clue, or ask Dr. C.
Houston [863 University Drive
katoon, Saskatchewan S7N 0J
Karen Rispin, Box 507, Dalmen
katchewan. S0K 1E0

EDITOR'S NOTE:

Due to the small number of
members now belonging to the
and to the lack of response to the
section, the Board of Directo
decided to provide our junior me
with a magazine that is more su
their age level. The SNHS has
donation to *Kid Proof*, an award-w
Saskatchewan magazine for s
children produced by three R
women, in return for the addition
names of our junior members to it
ing list. In addition to *Blue Jay* our
members will receive *Kid Proof*.
is encouraged to submit nature art
the magazine in order to incre
natural history content.

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TTERFLIES OF NORTH KOTA An Atlas and Guide

A. ROYER. 1988. Science
ograph No. 1. Minot State Univer-
Minot, ND. 192 pp. 12 colour, 1
plates; 142 maps. Cerlux bound.
x 203 mm). $20.50

ien writing a bibliography for Sas-
ewan butterfly watchers in the June
Blue Jay, I had not seen this attrac-
volume. Each of the state's 142
es is illustrated — all but two in
r — at 60% life-size, which results
me images tat are pretty small.
s are of whole insects and usually
upper and lower surfaces of both
Sixteen specimens of the highly
le Uhler's Arctic are shown. After
luctory chapters there are three
sections: text on identification and
gy of each species (74 pp.), distribu-
naps by county for each (32 pp.),
ates of excellent colour with facing
ications (52 pp.). The publication
ides with lists of expected species,
zations and suppliers, a glossary
dex (16 pp.).

purpose is "to offer to naturalists,
rs and the young people of North
a an understandable and truly use-
oductory guide ..." In some ways
nual falls far short of that goal. In
erest of comprehension, was there
l for unnecessary jargon such as
oltine" or "maculation" and
genic" (none of these is in the glos-
t is also difficult to imagine a less
organization. How much more
nient it would have been to have
tribution map with each species.
ustrating for non-scientists to find
only scientific names with maps and photographs, and only metric measurements! And how much more straightforward it would have been to assign numbers to connect legends and photos, especially when there are up to 56 of each on facing pages. (A name is located on one page in the same position as its photo on the opposite page.) The lack of cross-referencing adds to the difficulty of use: text for a species does not tell the reader where its map can be found, and neither map nor illustration indicates where the species' text is found. There was also an inexcusable waste of trees with 13 pages of photos and their facing 13 pages of legends occupying 52 pages (the backs are blank).

However, because its colour photos cover 103 of Saskatchewan's 144 species (2 more are in black and white), this title is well worth adding to your butterfly library. — Reviewed by *Bernie Gollop*, 2202 York Avenue, Saskatoon, Saskatchewan. S7J 1J1

GEOLOGICAL HISTORY OF SASKATCHEWAN

JOHN E. STORER 1989. Saskatchewan Museum of Natural History, Regina, Saskatchewan. Illus. color and b/w, map, folding charts. $13.95.

This attractively produced and lavishly illustrated work constitutes the first general account of Saskatchewan geology to be written for the general reader. Its production was linked with the opening of the new Earth Sciences Gallery of the Saskatchewan Museum of Natural History, Regina. The greater part of its illustrations — most of them in colour —

are, indeed, photographs of the displays. In consequence, though this book can be quite well read in isolation, it will be used most effectively as an educational tool before, during of after visits to the Museum.

Though an interesting section on "The evolution of the Trans-Hudson Orogen (Mountain Belt) 2.1 to 1.8 billion years ago" was contributed by John Lewry of the University of Regina, the greater part of the text was written by John Storer himself. This affords the considerable asset that Dr. Storer is a lucid writer, well able to explain Saskatchewan's geology in a fashion comprehensible to any reasonable intelligent and educated reader.

John Storer's heart lies with the higher vertebrates; the story of the Palaeozoic era and its life occupies on 10 pages, whereas the Tertiary — after all, a much shorter time! — is given 14 pages and an infinitely more loving consideration! However, this imbalance will not disturb most readers, for whom dinosaurs and mammals afford a very much greater appeal than any mere invertebrate!

Some of the illustrations present problems, simply *because* they are direct photographs of displays. For example, in the block model of Saskatchewan's geological structure (p. 15), the place-names which serve as reference points are altogether illegible; could not *larger* name-cards have been temporarily laid on, for the photograph? Similarly, the reconstructions of Paleocene coal-swamps (p. 64) and of a Late Eocene landscape (p. 66) are spoiled — the latter, especially so! — by the cases of specimens set at centre; surely these could have been removed before the pictures were taken? The striking, if rather bizarre, colour reconstruction on p. 45 lacks any caption, while the captions to the two figures on p. 48 have been absentmindedly transposed.

There are a few inconsistencies a). The figure on p. 28 is vaguely lab d "Fossils in Tyndall Stone;" at left a receptaculitid and at right, a stromat e. Yet, on p. 25, another stromatolit s labelled as such; while on pp. 30 an 1 there are reconstructions of re)-taculitids (the latter, oddly and misl l-ingly labelled a "sunflower coral" o which the illustration on p. 28 might e been usefully linked.

Certain other statements, though ot erroneous, are potentially mislead g. Yes, the Ordovician ostracods e "among the largest in the group's hist " (p. 29); but an explanation that ostra ls are *micro*-organisms, and these gia a mere few centimeters long, would e helped a reader who did not know s. (Indeed, their textual juxtaposition h nautiloids tends to suggest that h groups were equally large!) Person l deprecate the use of the name "fl ng lemurs" (p. 66) for animals that re neither lemurs nor capable of flight; c ld not "dermopteran" or "colugo" ve been used instead? "Shrubox" (p. 5) puzzled me considerably, until I rea ed that a hyphen had been omitted! (Sh b-ox?)

These are all minor matters, how er, that can be attended to when the ok goes into its second edition (as sur it must!). All in all, this is a vividly prese ed and well-written work that should ot only be of high value to s-katchewanians already interested in ol-ogy and the life of the past, but so to inspire such interests in persons hit to indifferent to these topics. John S er, John Lewry and the Museum of Na al History have done a real service to ur province by making it available in su a pleasant format and at so moder a price. — Reviewed by *William A.S ar-jeant*, Department of Geological S n-ces, University of Saskatche n, Saskatoon, Saskatchewan. S7N 0W

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